

HELMINTHOLOGICAL ABSTRACTS

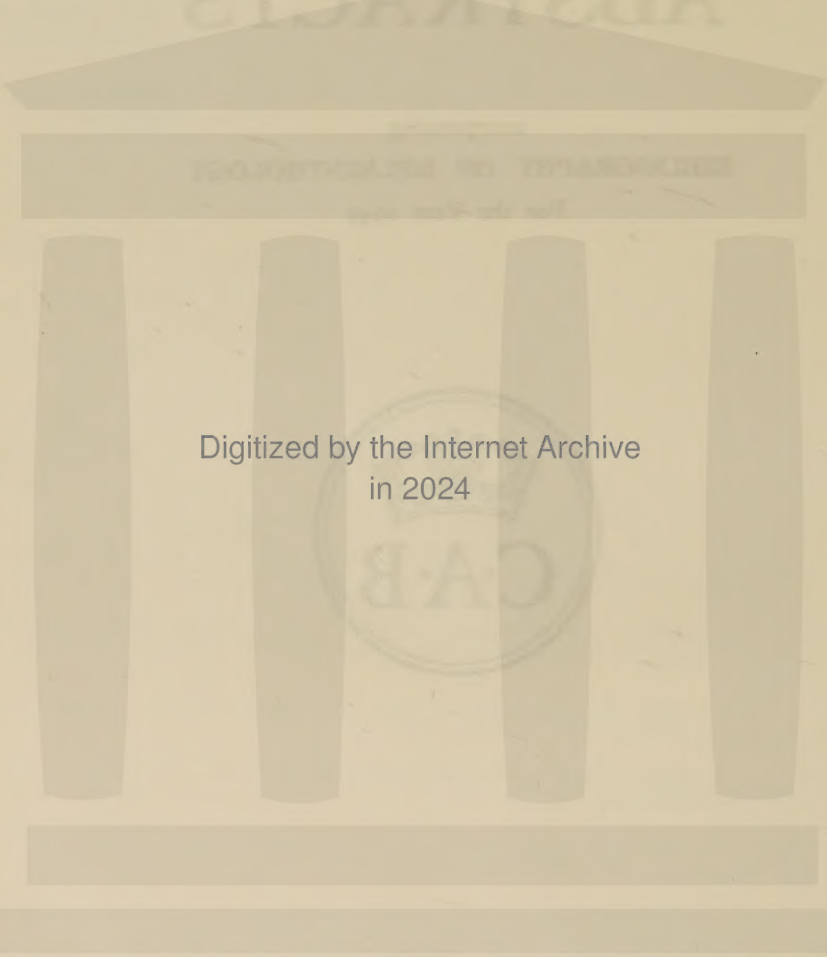
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For the Year 1949



**COMMONWEALTH BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)**

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HELMINTHOLOGICAL
ABSTRACTS



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HELMINTHOLOGICAL ABSTRACTS

Vol. 18, Part 5

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HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY

FOR THE YEAR 1949

Vol. 18, Part 5

534—Abstracts of Theses. Louisiana State University.

- a. STUBBS, H. L., 1949.—“A survey of the intestinal parasites in white and negro school children in St. Landry parish.” 41 (3), 89.

535—Abstracts of Theses. Tulane University.

- *a. McQUAY, Jr., R. M., 1949.—“Studies on *Schistosoma mansoni*, with special reference to the infectibility of Louisiana species of *Tropicorbis*.” Year 1949, p. 96.

(535a) McQuay has studied the susceptibility of *Tropicorbis* spp. to infection with *Schistosoma mansoni*. Laboratory colonies of *T. havanensis* from Baton Rouge were infected by miracidia of a Puerto Rican strain of *S. mansoni* but *Tropicorbis* sp. from New Orleans were refractory. Neither species of snail could be infected with miracidia of *S. mansoni* from a baboon (*Papio papio*). [Based on an abstract in *Biol. Abs.*, 24 (8), No. 25544.] S.W.

536—Acta Chirurgica Scandinavica.

- a. BECKMAN, T. M., 1949.—“Surgical treatment of hydatid cysts.” 99 (3), 266-279.
b. ARNELL, O., 1949.—“Biliary tract disease caused by *Taenia saginata*.” 99 (3), 280-284.

(536b) Arnell describes a case which was surgically treated for cholecystitis at Linköping, Sweden, in which a *Taenia saginata* 337 cm. in length had apparently developed in the gall-bladder. P.M.B.

537—Acta Medica Italica di Malattie Infettive e Parassitarie.

- a. GIROLAMI, M., 1949.—“Cisti da echinococco del fegato od associazione cancro ed echinococco?” 4 (6), 141-143.
b. CANNAVO, L. & CARUSELLI, M., 1949.—“L'anchilostomiasi.” 4 (10), 253-255.
c. RAIMONDI, A. & SAPIO, G. DI, 1949.—“Focolai anchilostomiasici in Provincia di Avellino.” 4 (12), 309-310. [English, French & German summaries p. 310.]

538—Acta Medica Philippina.

- a. TUBANGUI, M. & CABRERA, B. D., 1949.—“Studies on filariasis in the Philippines. II. Treatment of Bancroftian filariasis with hetrazan.” 6 (1), 1-7.
b. RECIO, P. M., 1949.—“Surgical aspects of helminthiasis.” 6 (1), 47-74.

(538a) Hetrazan in doses of 2 mg. per kg. body-weight were given orally after meals thrice daily for ten to thirty days to eleven persons infected with *Wuchereria bancrofti*. Toxic symptoms occurred on the first or second day in all the patients but were of short duration. A rapid and sustained diminution of the microfilariae followed. Eleven months later four cases were negative. Five had very low microfilarial counts. Two of the patients were not available for re-examination. In a case of lymph scrotum there was clinical improvement. The drug may prove useful as a mass treatment to control the spread of infection to mosquito vectors. R.T.L.

* Titles so marked throughout this number have not been seen in the original.

539—Acta Medica Scandinavica.

- a. CAWSTON, F. G., 1949.—“South African schistosomiasis in the light of modern knowledge.” 135 (3), 216-219.

(539a) Schistosomiasis patients are relatively immune to reinfection once they have been completely cured by treatment or have recovered naturally. It is therefore unnecessary to attempt to eradicate the disease from primitive communities where there is a prejudice against injections. A temporary disappearance of eggs from the excreta may result from fever or other upsets to health or after sodium shocks or lightning cures with antimony sodium tartrate, but there is no evidence that schistosomiasis can be cured except by carefully regulated injections over a period of at least three weeks. In Durban, increased traffic on the river has discouraged human pollution of its banks with the result that *Physopsis africana*, formerly common, has disappeared and haematuria no longer exists. R.T.L.

540—Actualidad Médica. Granada.

- a. JÉREZ ROSELLY, L., 1949.—“Las sanguíjuelas en la rinofaringe, laringe, tráquea y bronquios.” 35 (295), 409-414.

(540a) The diagnosis and treatment of conditions arising from an invasion of leeches are summarized and ten medical cases in Granada are described. Leeches were present in four cases in the nasopharynx and in six cases in the larynx. R.T.L.

541—Afrique Française Chirurgicale.

- a. COSTANTINI, H., 1949.—“Trois nouveaux cas de périkystectomie hépatique pour kyste hydatique.” Year 1949, No. 9/10, pp. 229-233.
 b. DARDILL, J., 1949.—“Kyste hydatique du fémur. Désarticulation de la hanche.” Year 1949, No. 9/10, pp. 242-244.
 c. CURTILLET, E., 1949.—“Les kystes hydatiques de la face médiastinale du poumon.” Year 1949, No. 9/10, pp. 247-248.

542—Agrario.

- *a. TAGLE V., I., 1949.—“La equinococosis.” 14 (405), 5.
 *b. TAGLE V., I., 1949.—“Cisticercosis del cerdo.” 14 (407), 7.

543—Agricultural Chemicals. Baltimore.

- a. STEINER, G., 1949.—“Boxwood nematode control.” [Summary of paper presented at the 25th Annual Convention of the National Shade Tree Conference, Baltimore, Md., August 22-26, 1949.] 4 (10), 46.

(543a) [For abstract of this paper see No. 742a below.]

544—Agricultural Journal. Department of Agriculture, Fiji.

- a. TURBET, C. R., 1949.—“Diseases of animals recorded in Fiji.” 20 (3), 89-91.
 b. TURBET, C. R., 1949.—“Internal parasites of animals recorded in Fiji.” 20 (3), 92.

(544a) In an annotated list of diseases of domesticated animals in Fiji, Turbet states that verminous bronchitis, haemonchiasis, oesophagostomiasis and paramphistomiasis are common in cattle, that oxyuriasis is common in horse, and that strongylosis is the commonest and most important disease of horses. R.T.L.

(544b) Turbet gives a list of the internal parasites of domesticated animals which have been recorded in Fiji with the dates of publication. The helminth species number in horses 7, in cattle 15, in goats and sheep 6, in pigs 8, in cats and dogs 7 and in poultry 7. R.T.L.

545—Agronomia Angolana.

- a. AZEVEDO NORONHA, E. DE, 1949.—“Notas fitopatológicas (de Agosto de 1948 a Maio de 1949).” Year 1949, No. 2, pp. 37-44. [English & French summaries p. 44.]

(545a) Azevedo Noronha gives particulars of the various diseases affecting crops in Angola during the period August 1948 to May 1949. These include the following records of nematode infestations: *Heterodera marioni* on *Solanum tuberosum* (potato), *Glycine soja* (soya bean) and *Lupinus* sp. (lupin). Roots of *Phaseolus vulgaris* (bean) were infested by an unidentified *Heterodera* sp. [probably *H. marioni* since galls were produced]. T.G.

546—Amatus Lusitanus. Lisbon.

- a. COSTA MAIA, C. DA, 1949.—“Contribuição para o conhecimento da ancilostomíase na ilha da Madeira e sua história. (Primeira comunicação.)” 7 (3), 111-154. [English, French & German summaries pp. 151-154.]

547—American Field.

- *a. CROWE, C. E., 1949.—“*Dirofilaria immitis* infection ; heartworms.” 152, 658-659.

548—American Journal of Ophthalmology.

- a. PUIG SOLANES, M., RIVEROLL NOBLE, B. & FONTE, A., 1949.—“Ocular onchocerciasis.” 32 (9), 1207-1212.

(548a) The incidence of ocular symptoms in 1,000 cases of onchocerciasis observed in Mexico was correlated with the number of nodules present, regardless of their size. Infection of the eyes occurred in 60% of those with less than five nodules and in 77.2% of those with a greater number. The clinical aspects of the acute and chronic forms are summarized and illustrated. In the chronic form the cornea was affected in 45% and there was iridocyclitis in 29%. The pathogenesis is attributed to the action of toxins generated in the nodules, or to the larvae. Prognosis is not good. R.T.L.

549—Anais do Instituto de Medicina Tropical. Lisbon.

- a. FRAGA DE AZEVEDO, J., COELHO, M. F. & CARVALHO, F. DE 1949.—“As parasitoses intestinais nas crianças de alguns asilos de Lisboa.” 6, 47-64. [English & French summaries pp. 61-63.]
- b. PINTO, A. R., 1949.—“Os primeiros dados sobre a existência da schistosomíase vesical na Guiné Portuguesa e importância da contagem de ovos do parasita no sedimento urinário.” 6, 75-114. [English & French summaries pp. 108-112.]
- c. COLAÇO, A. T. F., 1949.—“O miracil D no tratamento da schistosomíase vesical.” 6, 149-163. [English & French summaries pp. 161-163.]
- d. TENDEIRO, J., 1949.—“Algumas microfilárias dos animais da Guiné.” 6, 165-227. [English & French summaries pp. 218-223.]

(549a) Among the population of northern and southern Portugal, *Ascaris lumbricoides* and *Trichuris trichiura* are the most frequent helminth infections. The incidence is greater in rural than in urban districts. In 334 Lisbon children between 7 and 14 years old, the helminth incidence was: *Enterobius vermicularis* 90.4%, *Trichuris trichiura* 46.22%, *Ascaris lumbricoides* 8.43%, *Hymenolepis nana* 7.2%. Some of the children (5.52%) harboured hookworms but were found to come from Portuguese colonies. For *Enterobius*, direct examination of faeces gave 0.2%, Willis' method 8.1%, and NIH swabs 77% which rose to 90.4% after more than one examination. R.T.L.

(549b) Schistosomiasis haematobia is prevalent in Portuguese Guinea. It varies from 3% to 100% in different villages, but averages 52.7%. The area studied was situated near the rivers Caiomete and Pelundo and comprises the “regulados” of Costa de Baixo, Cajinjassá, Belequise, Bassarel, Calequise, Cati, Pelundo, Bugulha and Tame. The incidence in children was 84.4%, but was lighter in men (38.6%) and in women (60.7%). The molluscs collected were *Pyrgophysa* (B.) *forskali* [?], *Bulinus* (P.) *dautzembergi* and a

small planorbid; no furcocercariae were found. Anthiomaline administered according to Faust's scheme did not give satisfactory results, but the patients were cured when the treatment was prolonged. R.T.L.

(549c) After reviewing the results obtained by earlier workers in the treatment of schistosomiasis with miracil-D, Colaço describes his experiences in cases of vesical schistosomiasis in the province of Algarve in the southern part of Portugal. A daily dose of 20 mg. per kg. body-weight for four days resulted in cure in 60% only of the cases. Many patients abandoned treatment owing to the indisposition it caused. In one group of 15 patients, only three maintained treatment for five days, and five for four days, but one of these suffered severe intoxication; the remainder abandoned the treatment on the second or third day. Colaço does not think miracil-D should be used for mass treatment owing to the yellow colouring of the skin and the headache, dizziness and nausea which frequently follow its administration. The disparity of his results with those reported by Blair *et al.* suggests the possibility that there is a different strain of *S. haematobium* in Portugal. R.T.L.

(549d) The following new microfilariae from birds in Portuguese Guinea are described and illustrated by text figures and photographs: *Microfilaria tropae* n.sp. *M. rosae* n.sp. and *M. fragae* n.sp. in *Coracias abyssinicus*; *M. sarmentoi* n.sp. and *M. monodi* n.sp. in *Lophoceros nasutus nasutus*; *M. reis-martinsi* n.sp. in *Gyps rüppellii rüppellii*; *M. aboimi* n.sp. in *Numida meleagris galeata* apparently identical with that seen by Neave in 1906 in *N. ptilorhyncha* in the Sudan but not previously named; *M. francae* n.sp. and *M. machadoi* n.sp. in *Kaupifalco monogrammicus monogrammicus*; *M. palmeiroi* n.sp. in *Lamprocolius purpureus*; *M. gutterresi* n.sp. and *M. villiersi* n.sp. in *Francolinus bicalcaratus*; *M. almeidae* n.sp. and *M. piresi* n.sp. in *Bucorvus abyssinicus*. Tendeiro recalls that Railliet & Henry recorded the common occurrence of microfilariae of *Dirofilaria immitis* in the blood of dogs caught in the city of Bissau. No adults were found. The microfilaria in the blood of horses was identified as *M. sanguinis equi africana* Martini, 1903 but as this quadrinomial name is invalid, *M. balfouri* nom. nov. is substituted. R.T.L.

550—Anales de la Facultad de Medicina de Montevideo.

- a. TALICE, R. V. & GURRI, J., 1949.—"Desarrollo de *Cysticercus racemosus* y su relación con el grado de malignidad de la cisticercosis correspondiente." 34 (8/9), 827-840.
- b. TALICE, R. V. & GURRI, J., 1949.—"Sobre la morfología de *Cysticercus racemosus*. Existencia de un revestimiento ciliado en su pared." 34 (8/9), 841-844.

(550a) [A French translation of this article appears in *Ann. Parasit. hum. comp.*, 1950, 25, 121-140. For abstract see *Helm. Abs.*, 19, No. 51a.]

(550b) [A French translation of this article appears in *Ann. Parasit. hum. comp.*, 1949, 24, 412-413. For abstract see *Helm. Abs.*, 18, No. 308a.]

551—Anales de la Sociedad de Biología de Bogotá.

- a. RENJIFO-SALCEDO, S., 1949.—"*Mansonella ozzardi* en la región oriental de Colombia." 3 (5), 211-215. [English summary p. 214. Discussion pp. 215-216.]
- b. OTÁLORA, B., 1949.—"Microfilarias en mamíferos del país." 3 (6), 242-243. [Discussion pp. 243-244.]

(551a) Renjifo-Salcedo reports 12 cases of *Mansonella ozzardi* in the mountainous country of eastern Colombia; Faust confirmed the diagnosis. P.M.B.

(551b) Otálora reports the finding of microfilariae in the blood of dogs in Colombia. In the discussion there is a list of other animals in which microfilariae have been encountered. P.M.B.

552—Anales de la Sociedad Mexicana de Oftalmología.

- a. MAZZOTTI, L., 1949.—"Estudio acerca del tratamiento de la oncocercosis." 23 (1), 19-25.
 b. RIVEROLL NOBLE, B., 1949.—"Consideraciones acerca del ataque ocular en la oncocercosis. Manifestaciones oculares durante el tratamiento con hetrazán." 23 (1), 26-31.

(552a) Mazzotti reports that microfilariae of *Onchocerca volvulus* disappeared from the skin of patients treated with hetrazan but they frequently reappeared, though in smaller numbers after 4-8 months, especially in cases where the nodules had not been removed. Of 65 cases treated only seven were followed up for 6-14 months and of these five remained negative. A personal communication from Torres Estrada indicated that microfilariae disappeared from the eyes on the day after treatment, accompanied by the disappearance of eye symptoms particularly photophobia.

P.M.B.

(552b) The ocular reactions observed by Riveroll Noble in onchocerciasis patients during treatment with hetrazan were of an allergic nature and were confined to the anterior section of the eyes. They were probably due to the disintegration of microfilariae rather than to the direct action of the drug, as similar reactions had been observed in patients not treated with hetrazan; the drug, however, probably accelerates their onset. Ocular reactions were not more marked where conjunctival biopsy was positive and where microfilariae were present in the anterior chamber of the eye than in other patients. A longer period of observation is necessary before it can be affirmed that hetrazan is not injurious to the sight.

P.M.B.

553—Anatomical Record.

- †a. DOUGHERTY, E. C., RAPHAEL, Jr., J. C. & ALTON, C. H., 1949.—"Improved axenic cultivation of *Rhabditis briggsae* Dougherty and Nigon, 1949 (Nematoda)." 105 (3), 532.
 †b. NIGON, V. & DOUGHERTY, E. C., 1949.—"Attempts at hybridizing two closely related hermaphroditic species of the nematode genus *Rhabditis*." 105 (3), 532-533.
 †c. WALTON, A. C., 1949.—"Parasites of the Ranidae (Amphibia). XV." 105 (3), 628-629.
 †d. WALTON, A. C., 1949.—"Parasites of the Ranidae (Amphibia). XVI." 105 (3), 629.
 †e. WALTON, A. C., 1949.—"Parasites of the Ranidae (Amphibia). XVII." 105 (3), 629-630.
 †f. THOMAS, L. J., 1949.—"The effects of X-ray on *Rhabditis* species." 105 (3), 630.

(553a) Dougherty *et al.* found that a medium made up with most of the ingredients used by Kidder & Dewey for *Tetrahymena* and at the same levels with a few arbitrary exceptions "would support growth [of *Rhabditis briggsae*] superior to that with chick embryo alone when Kidder-Dewey ingredients were autoclaved at double strength in aqueous solution and then diluted to standard strength with chick embryo juice prepared by sterile pressing of approximately 12-day chick embryos from which eyes had been removed. Growth was about as rapid and reproduction as abundant as in the presence of bacteria".

R.T.L.

(553b) One hundred species of *Rhabditis* have now been described. Some are probably identical or groups of closely related forms. Attempts to hybridize *R. elegans* and *R. briggsae* by reciprocal mating of males and hermaphrodites uniformly failed.

R.T.L.

554—Annales Pharmaceutiques Françaises.

- a. JANOT, M. M. & CAVIER, R., 1949.—"Les propriétés anthelminthiques du chlorhydrate de conessine." 7 (8/9), 549-552.

(554a) Janot & Cavier have tested the anthelmintic activity of conessine chlorhydrate against *Rhabditis macrocerca* and the anterior end of *Ascaris lumbricoides* var. *suum* in vitro, and against oxyurids and *Hymenolepis fraterna* in mice. They found that it killed *R. macrocerca*, eliminated all the *H. fraterna* from six out of ten mice, was not as effective as santonin against the oxyurids and had not killed the ascaris after 1½ hours.

S.W.

† Abstract of paper presented at the 46th Annual Meeting of the American Society of Zoologists, New York, December 28-30, 1949.

555—Annales de la Société Belge de Médecine Tropicale.

- a. BELLEFONTAINE, L., 1949.—"Existence de *Wuchereria bancrofti* dans le territoire de Yahuma, district de Basoko." 29 (3), 251-254. [Flemish summary p. 254.]
- b. WANSON, M., COURTOIS, L. & LEBIED, B., 1949.—"L'éradication du *Simulium damnosum* (Théobald) à Léopoldville." 29 (3), 373-403. [Flemish summary pp. 402-403.]
- c. COURTOIS, G., 1949.—"Contribution au diagnostic et au traitement de la bilharziose intestinale à *Sch. mansoni*." 29 (4), 427-445. [Flemish summary p. 443.]
- d. COURTOIS, G. & WANSON, M., 1949.—"*Biomphalaria alexandrina choanomphala* V. Martens 1879 est un des hôtes intermédiaires de *Schistosoma mansoni* au lac Albert." 29 (4), 447-454. [Flemish summary p. 453.]
- e. GILLET, J., 1949.—"Contribution à l'étude de la bilharziose urinaire au Congo Belge." 29 (4), 457-481. [Flemish summary p. 478.]
- f. SCHWETZ, J., 1949.—"*Planorbis choanomphalus* du lac Albert est transmetteur de *Schistosoma mansoni*." 29 (4), 491-494. [Flemish summary p. 494.]
- g. BERGHE, L. VAN DEN, & CHARDOME, M., 1949.—"Une microfilare du gorille, *Microfilaria gorillae*." 29 (4), 495-499. [Flemish summary p. 499.]
- h. WOLFS, J. & DEVIGNAT, R., 1949.—"Note sur la lutte contre la bilharziose à Costermansville." 29 (4), 557-565. [Flemish summary p. 565.]

(555a) Bellefontaine, in a survey of 15 villages in the Belgian Congo, examined 54 persons for filariasis. Of these 90-74% were infected with *Onchocerca volvulus* and 47.4% with *Wuchereria bancrofti*; 47.4% had a mixed infection. S.W.

(555b) In the neighbourhood of Leopoldville, Belgian Congo, about 45% of the European population are infected with onchocerciasis, and the larvae occur in about 16.2% of the *Simulium damnosum* in the villages bordering on the rocky rapids just below Leopoldville and Brazzaville. Between October and January, especially in dry years, the flies emerge in great numbers from colonies on *Vossia*, *Echinochloa* and *Pennisetum nodiflorum*. Destruction of this vegetation did not markedly reduce the numbers of *Simulium*. The volume of water in the Congo at Leopoldville rendered the use of D.D.T. impracticable, but spraying by aeroplane showed considerable promise at a cost of 8,560 francs per hour. D.D.T. 20% in a 3:7 mixture of toluene and gas oil was atomized by a nozzle projecting into the exhaust. Daily flights over the breeding zones for 26 days virtually eliminated the adult *Simulium*. The mean monthly catch dropped in 7 months from 2,000 females to 255. Reinvasion by females from distant sites was at the rate of one per day, but this was finally checked by aerial treatment of dangerous sites. R.T.L.

(555c) *Schistosoma mansoni* is on the increase in the Belgian Congo. Morin's method is considered to be as effective as the other accepted means of concentrating eggs. A provocative intravenous injection of 2 mg. of Bayer 205, which causes an increase in the number of eggs to appear in the faeces in 24 to 48 hours, is valuable in revealing slight infections. When combined these two techniques disclosed a very high incidence of *S. mansoni* among the inhabitants on the shores of Lake Albert. Tartar emetic and glucantime (N-methylglucamine antimoniate) proved very effective in the cases treated. Fouadin, anthiomaline and Germanin were less active. Stilbamidine was ineffective in the one case in which it was tried. R.T.L.

(555d) Bequaert is stated to have formed the conclusion that the large planorbids of Tropical Africa which various malacologists have named *adowensis*, *pfeifferi*, *salinarum*, *ruppellii*, *katangae* etc. all belong to one species, *Biomphalaria alexandrina*. In the region of Lake Albert, four varieties of this species are present, viz., *pfeifferi* in the rivers and *tanganycensis*, *stanleyi* and *choanomphala* in the lake waters. *B. alexandrina pfeifferi* has a marked preference for slightly acid waters (pH 6.5 to 6.7) whereas the other three varieties live in waters with a higher pH. Specimens of *B. choanomphala* discharged three different kinds of cercariae. That 20% were morphologically those of *Schistosoma mansoni* was verified by experiments on white mice. R.T.L.

(555e) A study of the malacology of Buku-Dundji and Mateba, the two known foci of urinary schistosomiasis in the lower river region, showed that *Physopsis africana* was

the only mollusc common to both centres. Snails collected from endemic areas were bred and the offspring were infected with miracidia. Adult *Schistosoma haematobium* were obtained experimentally in white mice. Guinea-pigs similarly submitted to infection were negative. Attempts to produce infections of *Pyrgophysa forskali* and *Limnaea natalensis undussumae* were failures. Intramuscular injections of pentamidine isothionate temporarily increased the number of eggs passed in the urine, either by acting on the muscles of the uterus of the gravid worms or by hastening their expulsion from the bladder wall, but the miracidia then failed to infect *Physopsis africana*.
R.T.L.

(555f) Almost 100% of the riverine population of Lake Albert are infected with schistosomiasis. Over 99% of the planorbids on the shores of the lake belong to the species *Planorbis choanomphalus* and notably to the small variety characteristic of this lake which is much smaller than that found in Lake Kivu. A high percentage of these molluscs are naturally infected with schistosome cercariae. Experimental infection of mice showed that the cercariae were those of *Schistosoma mansoni*.
R.T.L.

(555g) Six out of twelve *Gorilla gorilla* from Ituri in the Belgian Congo harboured *Microfilaria gorillae* n.sp. which probably belongs to *Acanthocheilonema* or *Dipetalonema*. The average length is 170.78μ and the average breadth 3.38μ . Detailed measurements distinguishing this species from *Mf. perstans* and *Mf. vanhoofi* are tabulated.
R.T.L.

(555h) At Costermansville on Lake Kivu in the Belgian Congo the molluscs collected were *Planorbis stanleyi*, *P. adowensis*, *P. choanomphalus*, *P. (Gyraulus) natalensis*, *Bulinus strigosus*, *B. (Paranerita) alberti*, *Limnaea (Radix) natalensis undussumae*, and *Physopsis africana*. *Planorbis choanomphalus* and *Physopsis africana* were uncommon. Copper sulphate and D.D.T. did not prove effective as molluscicides, but a colloidal copper, copper oxydyle (Geigy) gave substantial and lasting results. Whereas lake water rendered the copper sulphate inert the colloidal copper remained lethal for over 30 days at 1 part in 800,000.
R.T.L.

556—Annales de la Société Royale Zoologique de Belgique.

- a. GREMBERGEN, G. VAN, 1949.—“Respiratorisch metabolisme von parasitaire wermen.” 79, 103-108. [French summary pp. 107-108.]

(556a) Grembergen has studied, by means of the Latapie-Brie method, the respiratory metabolism of *Fasciola hepatica*, *Moniezia benedeni* and *Ascaris*. For the first two he obtained values very similar to those for vertebrate tissues and Turbellaria. He is of the opinion that nematodes differ greatly from the platyhelminths and also among themselves; in *Ascaris* the respiratory rate depends on the oxygen tension of the medium and he considers that the paradoxical effect of potassium cyanide is due to a reaction between it, and a respiratory inhibitor which is already present. The presence of a haemoglobin in some trematodes and nematodes supports the view that in these species respiration by means of free oxygen is appreciable.
S.W.

557—Annales Universitatis Mariae Curie-Skłodowska, Lublin.

- a. BRANICKI, J., 1949.—“Rentgenowski obraz cysticercosis.” [The X-ray picture in a case of cysticercosis.] Sectio D, 4 (3), 497-505. [English summary pp. 504-505.]

558—Antiseptic. Madras.

- a. NAIR, T. D., 1949.—“Hetrazan in filariasis. (A short report.)” 46 (12), 926-927.
b. NARASIMHAM, E. L., 1949.—“Filarial fever.” [Correspondence.] 46 (12), 950.

(558a) Nair reports briefly that within three days of the administration of 18 standard size tablets of hetrazan, microfilariae bancrofti disappeared completely from the blood of a non-clinical patient who had previously had a very high microfilarial count. There were no allergic symptoms. In long standing cases and in elephantiasis the results were disappointing.
R.T.L.

(558b) Twenty typical well established cases of filarial fever with glandular enlargement and other clinical manifestations were treated with Paludrine over a period of six months. All became free from fever. There were no relapses and the patients resumed their normal duties although the other manifestations of the disease remained unchanged.

R.T.L.

559—Archiv für Innere Medizin. Stuttgart.

- *a. WEISE, H., 1949.—"Beitrag zum Krankheitsbild des *Cysticercus cellulosae*." 1 (1), 95-101.

560—Archiv für Psychiatrie und Nervenkrankheiten.

- a. SCHÖPE, M., 1949.—"Encephalitis bei Trichinose mit Nachweis einer Trichinelle im Gehirn." 181 (5/6), 603-610.

(560a) Schöpe reports a fatal case of trichinelliasis in a 32-year-old male with disturbances of the central nervous system. At post-mortem an unencapsulated *Trichinella* larva was found in the brain. Details are given of the histological findings.

A.E.F.

561—Archives Françaises de Pédiatrie.

- a. MARQUÉZY, R. A., BACH, C. & STRAUSS, 1949.—"Ascaridiose intestinale mortelle chez un enfant de 22 mois." 6 (2), 175-176. [Discussion p. 176.]

562—Archives des Maladies de l'Appareil Digestif et des Maladies de la Nutrition.

- a. CAROLI, J. & PARAF, A., 1949.—"Kyste hydatique perforé dans la vésicule biliaire. Problèmes diagnostique et thérapeutique." 38 (9/10), 965-969. [Discussion pp. 969-970.]

563—Archives des Sciences Biologiques. Belgrade.

- a. VUKOVIĆ, V., 1949.—[L'infection et surinfection du chien par *Taenia hydatigena*.] 1 (3), 258-261. [In Serbian: French summary pp. 260-261.]

(563a) Eggs of *Taenia hydatigena* were found in the faeces of a dog 58 days after experimental infection with ten *Cysticercus tenuicollis*. Thirty days after the initial infection 16 more cysticerci were administered. Autopsy 38 days later showed that the first 10 had developed into adult worms measuring 150-200 cm. and the remaining 16 into immature worms of 16-30 cm. It is concluded that the rate of growth increases with age and that the presence of the parasite does not affect further infection with the same species.

P.M.B.

564—Archivio Italiano di Dermatologia, Sifilografia e Venereologia.

- a. PARISI, P., 1949.—"Dermatosi ed elmintiasi. Dermatitis bollosa ed ascaridi." 22 (6), 431-445.

(564a) Parisi attributes a case of acute dermatitis in a boy six years of age to an allergic condition arising from *Ascaris* infection and pyogenic foci. Although the patient remained positive for *Ascaris* in spite of intermittent treatment for seven months with santonin and calomel, and with Tanelmin, the skin condition improved.

P.M.B.

565—Archivio Italiano di Scienze Mediche Coloniali e di Parassitologia.

- a. BENETAZZO, B., 1949.—"Sull'intradermoreazione con estratti di *Dirofilaria immitis*. (Prove clinico-sperimentali)." 30 (5/6), 80-89. [English, French & German summaries pp. 88-89.]
 b. D'IGNAZIO, C. & GIAQUINTO MIRA, M., 1949.—"Ricerche epidemiologiche in alcuni territori di Etiopia." 30 (7/8), 97-141.
 c. SCOTTI, G. & TRIPOLI, P., 1949.—"Ascaridiosi gastrointestinale e sua diagnosi con l'esame delle feci e con l'esame radiologico del tubo digerente." 30 (11/12), 182-190. [English, French & German summaries pp. 188-189.]

(565a) Benetazzo summarizes the literature on the use of antigen from *Dirofilaria immitis* in the diagnosis of other filarial infections. In his own investigations the presence of intestinal helminths and protozoa had no effect on the reaction. He concludes that the test is of value in epidemiological inquiries covering large numbers but not in sporadic cases.

R.T.L.

(565b) During an epidemiological survey in Ethiopia faecal examinations of 207 inhabitants of the Sciabe region showed *Ancylostoma duodenale* in 26.55%, *Ascaris lumbricoides* in 49.27%, *Trichuris trichiura* in 12.07%, *Strongyloides stercoralis* in 1.44%, *Enterobius vermicularis* in 0.96% and *Taenia saginata* in 0.48%. At Ambò, out of 103 persons examined 6.79% had *Taenia saginata* and 32.03% had *Ascaris lumbricoides*. Onchocerciasis is endemic in the forested zone of Kaffa, viz., Bonga (17%), Addia (47%) [given as 14.2% in Table I], Gheccia (24%), Paese dei Moccia (28.5%), Ciacca (25%) and Monchirà (52%). These and other centres are incorporated in a table. R.T.L.

(565c) Although X-ray is more expensive than microscopical examination of faeces it is a more certain method of detecting the presence of *Ascaris lumbricoides*. It is claimed that practically 100% of cases can be detected and that the method can be usefully used when the clinical picture is not confirmed by microscopical examination. R.T.L.

566—Archivio Zoologico Italiano.

- a. PALOMBI, A., 1949.—"I trematodi d'Italia. Parte I. Trematodi monogenetici." 34, 203-408.

(566a) Palombi's monograph deals with the systematics of the known Italian species of the Monogenea. Synonyms and formal diagnoses are given for its three suborders their respective superfamilies, families, subfamilies, genera and species. There are a considerable number of differential tables and text figures. A new family, Arreptocotylidae n.fam. in Diclidophoroidea is created for Discocotylinae, Diplozooninae n.subf. and Microcotylinae. Under each species the hosts and their localities are added. The monograph concludes with an alphabetical list of hosts with the parasites listed under each host, a combined index of parasites and hosts, and an extensive bibliography. R.T.L.

567—Archivos Brasileiros de Medicina.

- a. GÓES, P. DE, MOREIRAS, M. S. & OLIVEIRA, J. E. A., 1949.—"Nota sobre a incidência de parasitos intestinais (helminthos e protozoários), em 1,000 exames de fezes de beneficiários do IPASE, examinadas pelo método de Faust." 39 (9/10), 325-328.

568—Archivos de Oftalmología de Buenos Aires.

- a. MANZITTI, E. & RILLO CABANNE, G., 1949.—"Quiste hidatídico de órbita." 24 (8), 254-256.

569—Archivos de la Sociedad de Cirujanos de Chile.

- *a. CASORZO GENINATTI, L., 1949.—"Estudio clínico y terapéutico de 133 casos de quistes hidatídicos pulmonares." 1, 94-116.

570—Archivos de la Sociedad Oftalmológica Hispano-Americana. Madrid.

- a. PALOMAR COLLADO, 1949.—"La sangría local en oftalmología." 9 (8), 885-892.

571—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

- a. ARDAO, H. A., 1949.—"Contribución al estudio de la adventicia en los quistes hepáticos drenados." 34 (3), 338-349. [Discussion pp. 349-352.]
 b. YANNICELLI, R., 1949.—"Quiste hidático de pulmón en el niño. A propósito de 15 casos intervenidos." 34 (3), 353-373.
 c. CAMPO, J. C. DEL, 1949.—"Equinococosis pulmonar. Retención seca de membrana. Tratamiento. Resultados." 34 (4), 512-524.
 d. UGON, V. A., 1949.—"Tratamiento del neumotórax hidático." 34 (5/6), 642-643.
 e. CAUBARRERE, N. L., 1949.—"Hidatidosis de la pelvis." 35 (1), 62-75. [Discussion pp. 75-77.]
 f. LARGHERO YBARZ, P., 1949.—"Hemorragia espontánea en un quiste hidático del hígado con hidátide intacta." 35 (2), 168-171.
 g. CARRERA, I., 1949.—"Hidatidosis múltiple secundaria del piso supramesocólico." 35 (3/4), 323-328.
 h. ARANA INIGUEZ, R., MALOSETTI, H., TALICE, R. & SAN JULIÁN, J., 1949.—"Cisticercosis racemosa de la fosa posterior. Consideraciones clínicas y quirúrgicas." 35 (5/6), 374-393. [English summary p. 391.]

572—Archivos Venezolanos de Patología Tropical y Parasitología Médica.

- a. MAYER, M. & PIFANO C., F., 1949.—“Experiencias de ocho años en la elaboración y aplicación de un antígeno de vermes adultos de *Schistosoma mansoni* para la intradermo-reacción diagnóstica de la bilharziosis. (Con descripciones detalladas de la técnica y nuevas investigaciones.)” 1 (2), 1-35. [English summary pp. 32-34.]
- b. MAYER, M., PRISCO, J. DI & PRISCO, R. DI, 1949.—“La especificidad de la bilharzina de vermes adultos de *Schistosoma mansoni* en intradermorreacciones en personas alérgicas.” 1 (2), 36-40. [English summary p. 40.]
- c. PIFANO C., F., 1949.—“Aspectos clínicos del síndrome de Banti bilharziano en Venezuela.” 1 (2), 41-73. [English summary pp. 69-72.]
- d. POTENZA, L., 1949.—“Nódulos peritoneales en conejillos de Indias (*Cavia porcellus*), infectados experimentalmente con *Schistosoma mansoni*.” 1 (2), 74-85. [English summary pp. 84-85.]
- e. BRICEÑO ROSSI, A. L., 1949.—“Resultados obtenidos con el hetrazan en diferentes modalidades patológicas o clínicas de la wuchereriosis bancrofti.” 1 (2), 86-91. [English summary p. 91.]
- f. BRICEÑO ROSSI, A. L. & MAYER, M., 1949.—“*Mansonella ozzardi* en Venezuela.” 1 (2), 92-93. [English summary p. 93.]

(572a) An antigen named “bilharzina” prepared from adult *Schistosoma mansoni* obtained from guinea-pigs and mice, has been used extensively during the years 1940-1948 at Caracas for the examination of 30,000 suspected cases of schistosomiasis mansoni. Positive results were obtained in 95% of known cases, i.e. 20% more than those diagnosed with a *Fasciola hepatica* antigen. Details of its preparation and of its use in a solution of phenol or merthiolate for intradermal diagnosis are given. It is emphasized that larger quantities can be prepared from adult worms than from cercariae. No false positives resulted in cases with other infections and there were no allergic reactions. A proportion of the treated patients still showed a strong positive reaction. It is not yet known how long it takes for tests to become negative after cure. The antigen lost none of its efficacy after storage for four years in an ice-box and tests have shown that it can be used in hot climates without deterioration.

P.M.B.

(572b) Intradermal tests on 1,100 persons at Caracas using “bilharzina” prepared from adult *Schistosoma mansoni* show that this antigen is not affected by any other allergy. Tests with 50 different allergens produced no false reactions. It is noted that the percentage of positive results (29.8%) coincides approximately with the number of cases normally reported in Caracas. Most of the positive cases came from known endemic areas.

P.M.B.

(572c) In Venezuela, Pifano has kept under observation for ten years 182 cases of Banti's syndrome produced by *Schistosoma mansoni*. He recognizes three stages: (i) a moderate hepato-splenomegaly with anaemia, leucopenia and eosinophilia; (ii) a more marked splenomegaly, anaemia, leucopenia, lymphomonocytosis and eosinophilia, intestinal haemorrhages and in some cases diarrhoeic or dysenteric disturbances; (iii) hepatic cirrhosis, great splenomegaly, accentuated anaemia, leucopenia, serious haemorrhages and terminal ascites. Prophylactic splenectomy is recommended in moderate cases which have resisted medical treatment.

R.T.L.

(572d) In 13 out of 356 guinea-pigs experimentally infected with *Schistosoma mansoni* there were deep red or pearly-white granulomatous nodules on the peritoneal surface of the ileum and colon at autopsy 78 to 185 days after infection. Eggs, parasites and black pigment were present in the largest nodules while in the smallest there were cellular infiltrations only.

R.T.L.

(572e) Hetrazan administered in doses of 2 mg. per kg. body-weight three times daily for 10-25 days in ten cases of filariasis bancrofti resulted in complete disappearance of microfilariae, with alleviation of clinical symptoms and in some cases restoration of the tissue to normal. Hetrazan is considered to be of high therapeutic value.

P.M.B.

(572f) Briceño Rossi & Mayer report the occurrence of *Mansonella ozzardi* in the north of Venezuela among members of two tribes originating from the upper Orinoco River. This note mentions five cases reported by Briceño Rossi [see No. 790a below],

and records three further cases seen by Mayer in a sub-tribe of the Guahibas living in the triangle formed by the upper parts of the Orinoco and Meta rivers. Endemic foci of *Wuchereria bancrofti* at Puerto Cabello and of *Onchocerca volvulus* at Quiriquire are also noted.

P.M.B.

573—Arctic. Montreal.

- a. CONNELL, F. H., 1949.—"Trichinosis in the Arctic: a review." 2 (2), 98–107.

(573a) *Trichinella spiralis* in man and animals has a circumpolar distribution. The reported results of examinations of animals in the Arctic are tabulated. The incidence in polar bears examined to date is 51% and in dogs 72%. In the Arctic the infection is a major public health problem for which there does not appear to be any immediate solution.

R.T.L.

574—Arkiv för Zoologi.

- a. ALLGÉN, C. A., 1949.—"*Mononchus (Iotonchus) zschokkei* Menzel in Südschweden wieder-gefunden." Year 1949, 41 (3), Sect. B, No. 2, pp. 1–3.

575—Arquivos de Clínica. Rio de Janeiro.

- a. PEREIRA, O. A. & BARRETTO NETTO, M., 1949.—"Biópsia retal múltipla e oograma na esquistomose mansonii." 9 (3/4), 127–153. [English summary pp. 151–152.]

576—Arquivos da Escola Superior de Veterinária do Estado de Minas Gerais.

- a. FREITAS, M. G., 1949.—"Notas sobre a incidência de helmintos em suínos de Minas Gerais." 2, 47–50. [English summary p. 50.]
 b. FREITAS, M. G. & HIPÓLITO, O., 1949.—"Notas de helmintologia de *Gallus gallus domesticus* em Minas Gerais." 2, 51–59. [English summary pp. 57–58.]
 c. FREITAS, M. G., 1949.—"Sobre um cestóide de pombo doméstico em Minas Gerais—Brasil (Cestoda—Davaineidae)." 2, 61–62. [English summary p. 62.]

(576a) The incidence of helminths in 176 swine reared in the state of Minas Gerais was: *Oesophagostomum dentatum* 90.3%, *Metastrongylus salmi* 88.6%, *Stephanurus dentatus* 80.1%, *Hyostrongylus rubidus* 73.3%, *Ascaris lumbricoides* 46%, *Ascarops strongylina* 30.8%, *Macracanthorhynchus hirudinaceus* 22.2%, *Trichuris trichiura* 11.4%, *Cysticercus tenuicollis* 5.7%, and *Cysticercus cellulosae* 4%.

R.T.L.

(576b) The species of helminths which occur in poultry in the state of Minas Gerais number 25. Those found most frequently were *Capillaria collaris* 49%, *C. annulata* 46%, *Davainea proglottina* 38%, *Tetrameres (T.) confusa* 31%, *Ascaridia galli* 26.6%, *Strongyloides oswaldoi* 26%, *Heterakis gallinae* 22.5%, and *Acuaria (Cheilosporura) hamulosa* 12%. The following species were recorded from this state for the first time: *Capillaria bursata*, *Hymenolepis (Weinlandia) carioca*, *Prosthogonimus cuneatus*, *Postharmostomum commutatum* and *Tamerlania bragai*. Heavy losses in the state poultry-breeding establishments are attributed to helminth infections.

R.T.L.

(576c) *Raillietina (Skrjabinia) bonini* has been found in great numbers in domestic pigeons in the state of Minas Gerais.

R.T.L.

577—Arquivos da Faculdade de Higiene e Saúde Pública da Universidade de São Paulo.

- a. MEIRA, J. A. & GALVÃO, A. L. A., 1949.—"Considerações sobre a fase larvária da infecção ancilostomótica. Sobre dois casos clínicos de ancilostomíase aguda." 3 (1), 29–52. [English summary p. 51.]
 b. MEIRA, J. A., ELEJALDE, G. & PONTES, J. F., 1949.—"Sobre a arterite pulmonar esquistosomótica. (Revisão da literatura e apresentação de três casos, dos quais um comprovado pela necropsia)." 3 (2), 325–428. [English summary p. 408.]

(577a) Meira & Galvão report two cases of acute hookworm infection in children which was acquired at S. Vincente and Guarujá near Santos, Brazil. Cutaneous itching,

intense anaemia and abdominal pain with gastro-intestinal disturbances were present in both cases. Following the administration of hexylresorcinol, pure *Ancylostoma duodenale* infection was proved in one case but identification was impossible in the other. Clinical improvement was obtained after repeated anthelmintic treatment, but the haematological changes, particularly leucocytosis and eosinophilia persisted for a long time. P.M.B.

(577b) The literature of pulmonary schistosomiasis is reviewed at considerable length. In Part I the subject matter is considered under the headings: clinical cases, symptomatology, radiology, electrocardiography, pathogenicity, pathology, diagnosis and differential diagnosis, prognosis and treatment. Part II gives details of three cases observed by the authors. R.T.L.

578—Arquivos do Instituto Penido Burnier.

- *a. LECH, Jr., 1949.—“Cisticercose ocular.” 8, 13–64.

579—Arquivos da Universidade da Bahia Faculdade de Medicina.

- a. STIGLIANI, R., 1949.—“Interpretação hispatológica da reação tecidual schistosomótica na descrição de algumas raras localizações. (Ovário, trompa, útero, apêndice, mesenterio, gânglio linfático mamário.) Schistosomiose associada a tumores (adenoma retal solitário, teratoma ovárico, epiteliomas do útero, câncer da mama.)” 4, 321–403.

580—Atti della Società Italiana delle Scienze Veterinarie.

- a. BAGEDDA, G., 1949.—“Rachicentesi e síndrome umorale cefalo-rachidiana nella cenurosi cerebrale degli ovini.” [Abstract.] 3, 355. [Also in English & French pp. 355–356.]
- b. BAGEDDA, G., 1949.—“La diagnosi di sede nella cenurosi cerebrale e cerebellare degli ovini. (Contributo clinico.)” [Abstract.] 3, 356. [Also in English & French p. 357.]
- c. BAGEDDA, G., 1949.—“Contributo alla diagnosi clinica di sede nella cenurosi degli ovini. (Il decubito laterale sintomo patognomônico di una cisti ad azione prevalente sul terzo medio dell'emisfero cerebrale controlaterale messo in evidenza mediante la prova del decubito obbligato.) (Nota seconda.)” [Abstract.] 3, 358. [Also in English & French p. 358.]
- d. BAGEDDA, G., 1949.—“Contributo alla diagnosi clinica di sede nella cenurosi degli ovini. (La prova della anopsia temporanea indotta, prova anottica, per rendere palese il sintomo prepotente in stato di latenza.) (Nota terza.)” [Abstract.] 3, 359. [Also in English & French p. 359.]
- e. BAGEDDA, G., 1949.—“La patogenesi del maneggio nella cenurosi cerebrale degli ovini.” [Abstract.] 3, 360. [Also in English & French p. 360.]
- f. BAGEDDA, G., 1949.—“La tecnica della craniectomia per l'estrazione della vescicola idatigena nella cenurosi cerebrale degli ovini.” [Abstract.] 3, 361. [Also in English & French pp. 361–362.]
- g. PELLEGRINI, D., 1949.—“Il *Cysticercus dromedarii* (Pellegrini, 1945) del cammello e del bovino e relativa *Taenia hyaenea* (Baer, 1927) della iena.” 3, 596–603. [English & French summaries p. 602.]
- h. BALDELLI, B., 1949.—“Sopra la frequenza degli elminti gastro-intestinali nei suini dell'Umbria dedotta da cento esami coprologici.” 3, 603–608. [English & French summaries p. 608.]

(580b) Bagedda discusses the clinical symptoms which form the most useful guide for craniotomy as a method of eradicating coenurus in sheep. R.T.L.

(580c) This is an abstract stating that the communication dealt with the clinical diagnosis of *Coenurus cerebralis* in sheep and showed by photographic records that lateral decubitus is a pathognomonic sign that the cyst was chiefly on the middle upper third of the other side of the cerebral hemisphere. R.T.L.

(580d) Bagedda has used induced temporary anopsia as a complementary means of diagnosing the location of *Coenurus cerebralis* in sheep. P.M.B.

(580e) Bagedda considers that in cases of *Coenurus cerebralis* in sheep the hypotonus, which results in contralateral flexion of the neck, originates from the neopallium. It is attributed to functional erethism of the nervous elements of the corresponding area which results from the constant excitation arising from the cyst. P.M.B.

(580f) This abstract states that Bagedda referred to various methods for the treatment of *Coenurus cerebralis* in sheep, and described a craniectomy technique which he had used successfully in many cases for the removal of the cyst. P.M.B.

(580h) Fifty-eight out of 100 pigs in Umbria, Italy, were positive for helminth ova. Strongylids (probably *Globocephalus longemucronatus*, *G. urosulatus* and *Oesophagostomum dentatum*) and trichostrongylids (*Hyostromylus rubidus*) were present in 41, *Ascaris lumbricoides* in 19, *Strongyloides papillosus* in 3, *Trichuris trichiura* in 2 and *Fasciola hepatica* in 2. P.M.B.

581.—Australian Journal of Science.

- a. BEARUP, A. J. & BOLLIGEL, A., 1949.—“Trichostrongylus infections in the common phalanger (*Trichosurus vulpecula*).” [Correspondence.] 12 (2), 75-76.

(581a) *Trichostrongylus colubriformis* and *T. rugatus*, important parasites of sheep, were also found in considerable numbers in *Trichosurus vulpecula* in the Moss Vale district of eastern New South Wales. Diarrhoea and marasmus with fatal termination were common. R.T.L.

582.—Australian Journal of Scientific Research. Series B, Biological Sciences.

- a. ROGERS, W. P., 1949.—“The biological significance of haemoglobin in nematode parasites. II. The properties of the haemoglobins as studied in living parasites.” 2 (4), 399-407.
b. JENNINGS, A. C., 1949.—“The biochemical characterization of a serologically active lipid fraction of the nematode *Haemonchus contortus*.” 2 (4), 408-420.

(582a) Rogers found that the amount of haemoglobin in *Nippostrongylus muris* was about 6 mg. (as haematin) per gm. dry weight of tissue. *Nematodirus* spp. and *Haemonchus contortus* contained about 0.8 mg. per gm. dry weight. The experiments indicated that the haemoglobin of *Nippostrongylus muris* may sometimes be oxygenated *in vivo*. The haemoglobin in the living parasites was easily oxygenated and deoxygenated; when the oxygen tension in the medium surrounding the parasites *in vitro* at 37°C. fell below about 13 mm. of mercury (*Nippostrongylus muris*) or 9 mm. of mercury (*Haemonchus contortus* and *Nematodirus* spp.) the oxyhaemoglobin became deoxygenated. The rate of oxygen consumption by the parasites was not lessened by poisoning the haemoglobins with low concentrations of carbon monoxide at oxygen tensions between 38 and 5 mm. of mercury. Rogers concludes that the haemoglobins, though present in sufficient amounts and apparently having suitable properties, are not actively concerned in the transport of oxygen in the parasites. W.P.R.

(582b) Jennings prepared protein, polysaccharide and lipid fractions from adult *Haemonchus contortus*. The lipid fraction was the only one essentially concerned in reactions with natural antisera from sheep, and further work was carried out to determine the nature of the serologically active lipid. It was found to be hydrophilic, acidic, highly susceptible to oxidation, free from protein and polysaccharide, and to have a molecular weight greater than 1,000. Similar material which reacted with *H. contortus* antisera was obtained from a variety of other nematode parasites. W.P.R.

583.—Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie.

- a. ESSBACH, H., 1949.—“Strongyloidose beim Schimpansen.” 110 (2), 319-345.

(583a) Essbach reports a fatal case of *Strongyloides* infection in a 4-year-old female chimpanzee at the Leipzig Zoo. Specific determination of the parasite was not possible but it was considered to be either *S. stercoralis* or *S. simiae*. The post-mortem findings, including ulceration of the intestinal mucous membrane and granuloma of the intestinal wall, are described in detail. A.E.F.

584—Belgisch Tijdschrift voor Geneeskunde.

- a. BRUSSELMANS, P., 1949.—“Middelen en behandelingskuren tegen de oxyurase.” 5 (14), 669-672.

(584a) Brusselmans observes that, as in the case of all parasitic diseases, there has been a big increase in the incidence of enterobiasis since the war. No effective treatment has been evolved and the search for cures continues, as is evident from two papers which he reviews. (i) R. Pautrizel (in *Bull. Soc. Pharm. Bordeaux*, 1945, 83, Fasc. III) refers to the administration of derivatives of phenothiazine and triphenylmethane. (ii) L.C. (in *Vichy Médical, Pages de Thérapeutique Pratique*, 1946, No. 10) deals with the efficiency of pyrethrins, gentian violet and phenothiazine. He observes that prevention of reinfection is as important as the removal of the parasites. In old infections the abnormal amounts of mucus in the intestines must be removed by suitable medication before the administration of the anthelmintics. P.L.leR.

585—Bergcultures. Batavia.

- a. FLUITER, H. J. DE, 1949.—“Het aaltjesprobleem in de koffiecultuur.” 18 (8), 138-139, 141, 143, 145. [English summary p. 145.]

(585a) [This paper has been reprinted from *Tijdschr. PlZiekt.*, 1947, 53 (4), 101-109. For abstract see *Helm. Abs.*, 16, No. 159a.]

586—Bilten Vetseruma. Belgrade.

- a. SOKOLIĆ, A., 1949.—“Askarol i njegova primjena u nekoliko pokusa kod svinja invadiranih askaridama.” 2 (2/3), 37-53. [English, German & Russian summaries pp. 51-52.]

(586a) When Ascarol, containing 10% oil of chenopodium, was administered intranasally to pigs at the rate of 0.5-1.0 c.c. per kg. body-weight, the faeces of 10%-30% of the treated animals showed no ascaris ova seven days after treatment. After a second treatment given 14 to 30 days later 36%-60% of the pigs ceased to pass ascaris ova in their faeces. No ill effects followed this simple and precise method of treatment. R.T.L.

587—Biológico. São Paulo.

- a. PEREIRA, H. F. & GONÇALVES, L. I., 1949.—“Caramujos, caracóis e lesmas nocivos e meios de combate.” 15 (4), 65-73.
b. DRUMMOND-GONÇALVES, R., 1949.—“Nematóide que produz nódulos ou galhas nas raízes da figueira.” 15 (12), 238-239.
c. PENHA, A. M., 1949.—“Diagnóstico e tratamento da habronemose.” 15 (12), 240.

(587a) Methods of destroying fresh-water snails, including *Australorbis glabratus* (host of *Schistosoma mansoni*) and *Limnaea* sp. (host of *Fasciola hepatica*) were investigated on the Brazilian coast near São Paulo. Of the chemicals employed the most successful were metaldehyde and lead arsenate mixed with wheat flour and a bait. Both chemicals are very poisonous. P.M.B.

(587b) Drummond-Gonçalves gives a very brief account of *Heterodera marioni*, which in Brazil may have ten generations each year. Control comprises the cultivation of resistant varieties; with annual crops, soil fumigants can be used before planting; with perennial crops like the fig the best methods are high grade cultivation to facilitate the growth of new roots, the use of lime to neutralize soil acidity, and the interplanting of *Crotalaria spectabilis* as a trap-crop. B.G.P.

(587c) “Summer sores” irritated by the larvae of *Habronema* sp. frequently occur in animals where xenodiagnosis shows that there is no intestinal infection with this parasite. Various methods of treatment by local applications are suggested. P.M.B.

588—Blood-Horse.

- *a. TODD, A. C., 1949.—“Course of strongyle infection at a Kentucky breeding farm” 58, 680-681.

589—Boletín Epidemiológico. Mexico.

- a. RUIZ REYES, F., 1949.—“Estudio epidemiológico de la zona oncocercosa del Estado de Oaxaca, Mex.” 13 (3), 73-92.
- b. RUIZ REYES, F. & CENICEROS GONZÁLEZ, S., 1949.—“La dietilcarbamazina (hetrazán) como vermífugo.” 13 (3), 93.
- c. HERNÁNDEZ LIRA, J. P., 1949.—“Distribución geográfica y patología de la uncinariasis en la República Mexicana.” 13 (4), 111-115.
- d. PINTADO, R., 1949.—“Proyecto de campaña contra la uncinariasis.” 13 (5), 149-150.
- e. MORALES CISNEROS, A., 1949.—“Observaciones sobre biopsias en enfermos oncocercosos.” 13 (6), 190-192.

(589a) Ruiz Reyes estimates that an average of 15.5% of the population of 43,858 in the onchocerciasis zone of Oaxaca, Mexico, are infected with this disease. An incidence of 50% to 90% was recorded in many villages, reaching 100% in parts of Ixtlán. The endemic area, illustrated by a map and various tables, is roughly rectangular in shape and lies between Ixtlán, Villa Alta, Usila and Tuxtepec. Owing to movements of population the infection is spreading to new areas of the States of Vera Cruz and Oaxaca where *Simulium ochraceum*, the principal vector, has recently been found. The ocular lesions in Tliltepec are tabulated. Of a total population of 152 persons 97.3% had onchocerciasis and 91.6% had ocular lesions, with conjunctivitis in 72.9%, keratitis in 49.3%, iritis in 4.7% and blindness in 3.3%. The anatomical distribution of nodules in the Oaxaca zone was occipital 50.6%, temporal 19.6%, parietal 11.8%, costal 4.6% and iliac crest 3.4%.
P.M.B.

(589b) During the treatment of onchocerciasis with hetrazan in Oaxaca intestinal helminths, principally ascarids, were eliminated usually between the second and fourth days.
R.T.L.

(589c) Hernández Lira summarizes other authors' work on the distribution and symptomatology of hookworm disease in Mexico.
P.M.B.

(589d) During investigations in Mexico over the last twelve years, Pintado found 190,222 cases of hookworm in the State of Vera Cruz, 77,857 in Tabasco, 18,147 in Oaxaca and 14,854 in Chiapas. He emphasizes the ineffectiveness of small-scale investigation and treatment in areas where the incidence is high and outlines a scheme for a campaign on a large scale.
P.M.B.

(589e) In 4,905 biopsies on 533 individuals in Mexico, of whom 479 had *Onchocerca* nodules, the percentage of positives which resulted from biopsies on various parts of the body was: chin region 32.47%, scapular 32.25%, deltoid 26.29%, costal 24.57% and iliac 22.6%. Apparently no relationship exists between the presence of microfilariae and the amount of exposure to light, or between positive biopsy and the proportion of nodules in that region. A positive biopsy in one part of the body is not necessarily indicative of a corresponding result on the opposite side; an average of 18% error is estimated when only one side is examined. For children scapular or deltoid biopsies, in which an error of 7.88% may occur, are recommended.
P.M.B.

590—Boletín del Instituto Español de Oceanografía.

- a. ANDREU, B., 1949.—“Sobre la presencia de dos cercarias en el ovario de almeja (*Tapes aureus* Gmelin) en la Bahía de Santander.” No. 22, 7 pp. [English summary p. 7.]

(590a) Cercariae and sporocysts of *Bucephalopsis haimeana* and *Cercaria ophiceca* were found in the ovaries of *Tapes aureus*, one of the common lamellibranchs in the Bay of Santander. Both are thought to be new to Spain and the latter new to the Atlantic.
P.M.B.

591—Boletín Médico. Caracas.

- a. POTENZA, L., FEBRES CORDERO, R. & ANDUZE, P. J., 1949.—"Nuevo foco endémico de oncocercosis humana en el mundo (Venezuela)." 1 (3), 263-285. [English summary p. 282.]

(591a) A new focus of onchocerciasis has been discovered in Venezuela. It appears to be restricted to a region of narrow valleys with numerous streams draining into the Rio Manzanares, lying in a triangle between the towns of Cumanacoa, Caripe and Aragua de Maturin. Within this area, which is from 250 to 1,000 metres above sea level, the towns of Guanaguana, San Francisco de Maturin, San Antonio de Maturin and El Guacharo are infected. The inhabitants of the region cultivate small areas of garden produce, tobacco and coffee. The only vector found so far is *Simulium metallicum* but *S. ochraceum* is probably also present. In all the children examined there were nodules on the head. No case of blindness was observed but there were ocular lesions, a superficial punctate keratitis and atrophy of the optic nerve. The paper is illustrated by a map and 20 figures. R.T.L.

592—Boletín de la Sociedad de Biología de Concepción (Chile).

- a. WOLFFHÜGEL, K., 1949.—"Es autóctono el *Diphyllobotrium* en Chile?" 24, 85-89. [English summary p. 89.]

(592a) Wolffhügel states that *Diphyllobotrium latum* is not indigenous in South America but several species of *Spirometra* occur there. He has found *D. (Spirometra) decipiens* in Chile but is uncertain if it is identical with the Eurasian forms which have been identified under this name. The name *D. decipiens* Dies. used by Wolffhügel and Vogelsang in 1926 must be replaced by *D. (Spirometra) serratum*. The adults and spargana of *D. (S.) decipiens* found in the Valdivia forest region are tabulated under their various hosts. R.T.L.

593—Boletín de Zootecnia. Córdoba.

- *a. PIJUÁN, M., 1949.—"Acuariosis." 5, 41-45.

594—Boletines de la Sociedad de Cirugía de Rosario.

- *a. GONZÁLEZ, C., 1949.—"Quiste hidático de hígado abierto en vías biliares." 16, 217-228.

595—Boletines y Trabajos. Academia Argentina de Cirugía.

- a. SAN MARTÍN, A. F., 1949.—"Quiste hidatídico de la cola del páncreas simulando tumor de bazo. (Resección. Curación)." 33 (25), 807-810.

596—Boletines y Trabajos. Sociedad Argentina de Cirujanos.

- *a. ABELENDA, E. F., 1949.—"Quiste hidatídico muscular primitivo." 10 (24), 736.
*b. FUNES DE RIOJA, D., 1949.—"Lobectomía inferior izquierda por hidatidosis complicada." 10 (26), 817.

597—Bollettino d'Oculistica.

- a. MISSIROLI, G., 1949.—"Considerazioni cliniche sull'estrazione del cisticerco sottoretinico con particolare riguardo agli esiti a distanza." 28, 705-726. [English & French summaries pp. 724-725.]

(597a) Missiroli reports on the successful surgical treatment of eight cases of subretinal cysticerciasis. P.M.B.

598—Bollettino della Società Italiana di Medicina e Igiene Tropicale (Sezione Eritrea di Medicina Umana e Veterinaria).

- a. FERRO-LUZZI, G., 1949.—"Rapporto percentuale maschi-femmine nell'infestione da *Necator americanus* in Eritrea." 9 (4/5), 315-318. [English summary p. 318.]
b. LANZO, A., 1949.—"Studio sul sistema circolatorio nell'anchilostomiasi eritrea." 9 (4/5), 325-342. [English summary p. 340.]

- c. SOFIA, F., 1949.—“L'emo-mielogramma nella anchilostomiasi in Eritrea.” 9 (4/5), 369-386. [English summary p. 385.]

(598a) In 50 Eritrean natives with hookworm disease due to *Necator americanus*, the incidence of male worms ranged from 6% to 45% with an average of 23.3%. Ferro-Luzzi points out that it is therefore misleading to base an estimate of the number of worms on the presumption that the females form 50% of the total. R.T.L.

(598b) From an investigation into the cardio-circulatory conditions in 30 natives of the Eritrean highlands who were suffering from ancylostomiasis, it appeared that there was cardio-circulatory damage in every case and myocardiac damage in 50%. These changes are attributable to the anaemic condition of the patients and to dietetic insufficiency. R.T.L.

(598c) From a study of 40 cases of ancylostomiasis (*Necator americanus*) during infection and immediately after disinfestation, Sofia found that in the first phase there was hypochromic anaemia which was microcytic in 85% and macrocytic in 15%. In the more severe cases there was anisocytosis, poikilocytosis and schistocytosis, eosinophilia which was an index of an allergic condition, increase of parenchymal elements especially haemo-histioblasts in the marrow, hyperactivity in the production and evolution of the erythroblasts, and hypo-activity in the evolution of the granuloblasts. In the second phase the blood picture and the leuco-erythrocytic ratio tended to return to normal. Hyperactivity in the evolution of the erythroblastic series persisted while the myelocytic phase in the maturation of the granuloblastic series slowed as in normal subjects living in the Eritrean highlands. R.T.L.

599—Bollettino della Società Medico-Chirurgica. Cremona.

- a. GIOVANNA, G. DELLA, 1949.—“Sulla sindrome di Löffler di genesi elmintica.” 3 (3/4), 3-11. [English & French summaries pp. 10-11. Discussion p. 11.]

(599a) Describing Loeffler's syndrome in ascariasis with particular reference to one case, Giovanna discusses the importance of distinguishing between pulmonitis, caused by the presence of *Ascaris* larvae in the lungs, and Loeffler's syndrome caused by the adult helminth allergens. P.M.B.

600—British Journal of Radiology.

- a. ERFAN, H. & DEEB, A. A., 1949.—“The radiological features of chronic pulmonary schistosomiasis.” 22 (263), 638-642. [French, German & Spanish summaries p. 642.]

601—Bulletin de l'Académie Vétérinaire de France.

- a. PLACIDI, L., LEDUC, P. & SANTUCCI, J., 1949.—“Un cas curieux de filariose canine.” 22 (7), 297-298.
b. JACQUET, J., 1949.—“Fasciolose du lapin.” 22 (7), 305-306.
c. GUILHON, J., 1949.—“Propriétés anthelminthiques d'un dérivé de la pipérazine.” 22 (8), 361-363.

(601a) Placidi, Leduc & Santucci draw attention to a rare case of filariasis in a 5-year-old dog at Teneriffe. The animal developed alarming signs of dyspnoea and died within two minutes when subjected to an examination. The autopsy revealed heavy infestation with *Rhipicephalus sanguineus*, effusions of blood in the subcutaneous connective tissue of neck, shoulders and thighs, blood clots in the alimentary canal, congested lungs, a pleural effusion containing numerous entangled masses of very fine hair-like worms, a large number of worms in the peritoneal cavity, some worms in the left ventricle, and the lumen of the aorta at the diaphragm obstructed by a mass of worms. *Dirofilaria immitis* was present only in very small numbers. *Dipetalonema dracunculoides*, which formed the bulk of the worms found, is normally a parasite of the pleura and does not appear to have been recovered previously from the pleural cavities, the right heart and the aorta.

Females were much more numerous than males (nine-tenths of the total). It is suspected that *R. sanguineus*, known to be the intermediate host of several filariae and especially of *Dirofilaria immitis*, may probably act as an intermediary of *Dipetalonema dracunculoides*.

P.L.ler.

(601b) Jacquet records what he accepts to be the second case of *Fasciola hepatica* infection in a domestic rabbit in France. The first case was reported by Railliet in 1887. Hypertrophy and extensive cirrhosis of the liver had occurred. An encapsulated liver abscess, the size of a hazel nut and suspected to be due to hepatic coccidiosis, proved on microscopic examination to be identical with the pulmonary abscesses due to distomiasis of the lungs in ruminants. The liver abscess contained an accumulation of typical eggs of *F. hepatica*. The absence of eosinophils from the affected portions of the liver is mentioned, and attention is drawn to the erratic localizations of parasites in their normal hosts. P.L.ler.

(601c) According to Guilhon's experiments, a 1-diethyl-carbamyl-4-piperazine citrate [= Caricide] has only a slight anthelmintic action on *Ascaridia*, *Capillaria*, *Ancylostoma caninum*, *Uncinaria stenocephala*, *Toxocara canis*, *Ascaris lumbricoides*, *Angiostrongylus vasorum*, *Dicrocoelium dendriticum* and the Trichostrongylidae of sheep. R.T.L.

602—Bulletin Horticole.

- *a. BRENY, R., 1949.—"L'anguillule du chrysanthème (*Aphelenchoides ritzema-bosi* Schwartz)." New series, 4, 99-104.

603—Bulletin de l'Institut d'Hygiène du Maroc.

- a. FAURE, J., 1949.—"Contribution à l'étude de l'éthino-coccose dans la région de Marrakech." 9 (3/4), 211-232.

604—Bulletin Médical de l'Afrique Occidentale Française.

- a. PUYUELO, R., 1949.—"Note préliminaire sur l'onchocercose volvulaire africaine en pays Mossi. Le 3.799 R.P. (Notezine)." 6 (2), 147-151.
 b. DÉJOU, L., JONCHÈRE, H., KOERBER, A., LABAIL, P. & D'ALMEIDA, J., 1949.—"Les localisations génitales de la filariose de Bancroft en Afrique Occidentale française." 6 (2), 195-232.
 c. DESCHIENS, R., 1949.—"L'action pathogène des extraits d'helminthes, en général, et de schistosomes, en particulier." 6 (2), 233-238.

(604a) [This paper is practically identical with one published by the author in *Bull. Soc. Path. exot.*, 1949, 42 (11/12), 558-561. For abstract see *Helm. Abs.*, 18, No. 348d.]

(604b) [This paper has also appeared in *Méd. trop.*, 1950, 10 (1), 31-60. For abstract see *Helm. Abs.*, 19, No. 353a.]

(604c) Deschiens considers broadly some of our present knowledge of the action of helminthic extracts. Trichloroacetic acid is generally used for extraction, the resulting solution containing the polypeptides which are the toxic substances; the precipitated proteins cause sensitivity and bring on eosinophilia. Acute intoxication can only be produced by ascarids, strongyles and filariae. Schistosome extracts are very toxic and are capable of producing allergy; extracts of *Schistosoma bovis* when injected into guinea-pigs produce chronic intoxication with dyspnoea, eosinophilia, bronchial spasms and various kidney and liver changes. These changes recall the toxæmia of human schistosomiasis: local inflammatory reactions are very marked.

P.A.C.

605—Bulletins et Mémoires de la Société Française d'Ophtalmologie.

- a. STREIFF, E. B., 1949.—"L'aspect biomicroscopique d'une microfilariose cornéenne." 62, 161-165. [Discussion pp. 165-170.]
 b. DROUET, P. L., THOMAS, C., CORDIER, J. & ALGAN, B., 1949.—"Origine parasitaire de certaines hémorragies récidivantes du vitré." 62, 250-253.

(605a) Biomicroscopic examination of the eyes of a woman who had lived for a long time in French Guinea and had various ocular disturbances including photophobia, revealed

the presence of corneal lesions and minute white streaks which Streiff diagnosed as dead microfilariae of *Onchocerca volvulus*; there were also conjunctival nodules which on histological examination were found to contain microfilariae. No cutaneous nodules were present. Although at first hetrazan gave rise to an allergic urticaria which required treatment, it greatly improved the ocular condition; a second course resulted in a 100% improvement. P.M.B.

(605b) Drouet *et al.* discuss ten cases of recurrent haemorrhages of the vitreous humour diagnosed as arising from *Ascaris* infection. Anthelmintic treatment alone did not cure the ocular condition owing, apparently, to the continued presence of the *Ascaris* toxin after the faeces had become negative. The use of 2786 RP periodically until the intradermal reaction to *Ascaris* toxin became negative eliminated the allergic condition in eight of the ten cases. The congenital or acquired conditions concerned in the failure of the treatment in the other two cases are considered. P.M.B.

606—Bulletin. Missouri Agricultural Experiment Station.

a. ELDER, C. & RODABAUGH, D. E., 1949.—“Internal parasites of sheep.” No. 527, 11 pp.

(606a) Helminthiasis in sheep is becoming increasingly serious in Missouri. The most serious infections are due to *Haemonchus contortus*, *Oesophagostomum columbianum*, *Ostertagia circumcincta* and the tapeworms *Moniezia expansa* and *M. benedeni*. The heaviest mortality occurs in late summer and early autumn. Although phenothiazine has little effect on *O. circumcincta* or the tapeworms, it has proved a great boon in the control of nodular worm. In most cases free access to a 1:10 phenothiazine-salt mixture has proved entirely satisfactory, if heavily parasitized sheep have been previously drenched. R.T.L.

607—Bulletin. New York State Flower Growers Incorporated.

a. DIMOCK, A. W. & FORD, C. H., 1949.—“Parathion controls leaf nematode disease of chrysanthemums.” No. 50, p. 8.

(607a) In this popular article Dimock & Ford say that parathion has given almost perfect control of chrysanthemum leaf eelworm when used either in the form of wettable powder or emulsion. It can probably be used mixed with sprays for the control of *Septoria* leafspot. No appreciable control was given by D.D.T., nicotine, chlordane, “TEPP” [tetraethyl pyrophosphate] or benzene hexachloride sprays. [No details of the experiments are given.] M.T.F.

608—Bulletin. New Zealand Department of Agriculture.

a. HOWSE, A. C., 1949.—“Internal and external parasites of poultry.” No. 327, 7 pp.

609—Bulletin des Services de l'Élevage et des Industries Animales de l'Afrique Occidentale Française.

a. HULIN, P., ROBINET, A. H. & RIVIÈRE, R., 1949.—“Un cas de spirocerose canine.” 2 (4), 37–38.

(609a) The symptoms and post-mortem findings in a case of *Spirocerca sanguinolenta* infection in a local dog at Niamey, French West Africa, are briefly reported. R.T.L.

610—Bulletin de la Société des Sciences Naturelles de Tunisie.

a. BALOZET, L., 1949.—“Note sur un Spiruroidea de *Phenicopter roseus*.” 2 (3/4), 159–160.

(610a) A female nematode tentatively identified as *Tetrameres coccinea* was found in *Phenicopter roseus*. The male is still unknown. P.M.B.

611—Bulletin de la Société Zoologique de France.

- a. GALLIEN, L., 1949.—"Parasitisme protélien du genre *Nectonema* chez *Leander squilla* L. et *Portunus arcuatus* Leach." 74 (3), 179-184.
- b. THÉODORIDÈS, J., 1949.—"Sur la présence constante de nématodes larvaires Diplogasterinae chez des Geotrupidae (Col. Scarabaeoidea) de France." 74 (4/5), 277-283.
- c. ARVY, L., 1949.—"Présentation de documents relatifs à l'ovogenèse chez le dentale et à deux parasites de ce scaphopode: *Cercaria prenanti* n.sp. et *Haplosporidium dentali* n.sp." 74 (4/5), 292-294.
- d. BOBIN, G., 1949.—"Remarques cytologiques sur les cellules graisseuses de *Glossosiphonia complanata* L. (Hirudinée Rhynchobdelle)." 74 (4/5), 300-307.
- e. DOLLFUS, R. P., 1949.—"Présence de *Capsala laevis* (A. E. Verrill 1875) (Trematoda Monogenea) chez un *Tetrapturus* (poisson xiphiiforme) au large de la côte de Bretagne." 74 (6), 317-319.
- f. CHABAUD, A. G., 1949.—"A propos du cycle évolutif d'un *Synhimantus* (Nématoda—Acuariidae). Recherche des lois qui régissent la vitesse du développement suivant la place zoologique du parasite et la biologie de l'hôte intermédiaire." 74 (6), 342-345.

(611a) *Leander squilla* and *Portunus arcuatus* are new crustacean hosts for *Nectonema* sp. of which a number of specimens were found by Gallien in the neighbourhood of the marine station at Dinard.

R.T.L.

(611b) Larval Diplogasterinae were frequently present in species of *Typhoeus* and *Geotrupes* collected in France and Spain. Larvae of *Physocephalus sexalatus* in *G. stercorarius* and of *Ascarops strongylina* in *G. pyrenaeus* and *G. stercorarius* were found in Spain.

R.T.L.

(611c) *Cercaria prenanti* n.sp. was found encysted in the gonads of *Dentalium entalis* near Paramé.

R.T.L.

(611e) *Capsala laevis* found on *Tetrapturus lessonae* caught off the coast of Brittany has not hitherto been recorded on this host or in European waters.

R.T.L.

(611f) The development of *Synhimantus* (*Desportesius*) *spinulatus*, a parasite of *Bubulcus ibis* in Morocco, has been shown experimentally to take place in the ostracods *Cyprinotus salinus* and *Pionocypris vidua vidua*. The whole cycle from egg to adult requires less than 28 days. In other Spiruroidea it is much slower. Chabaud points out, with examples, that in the most highly specialized nematodes the life-cycle in the intermediate host is always of short duration, ranging from 7-25 days, whereas in the more primitive forms it is longer. Within these two groups the rate of development is similarly correlated.

R.T.L.

612—Bulletin of the United States Army Medical Department.

- a. SHEEDY, J. A., 1949.—"Intestinal parasites in patients with viral hepatitis." 9 (12), 998-1004.

613—Bulletin. University of Florida Agricultural Experiment Stations.

- a. SUIT, R. F., 1949.—"Parasitic diseases of citrus in Florida." No. 463, 112 pp.

(613a) Amongst a number of diseases of citrus in Florida caused by various pathogens, "spreading decline" associated with *Tylenchulus semi-penetrans* Cobb, the citrus nematode, occurs. The bulletin describes briefly the method of attack on roots and the effects on these roots and on the rest of the tree. The disease spreads slowly throughout the citrus grove and can only be controlled by removing infested trees, fumigating the infested soil and replanting with clean trees.

J.B.G.

614—Bulletin of the West Virginia University Agricultural Experiment Station.

- a. RIETZ, J. H. & WILSON, C. V., 1949.—"Mass feeding of salt and phenothiazine to breeding ewes and market lambs." No. 336, 14 pp.

(614a) Detailed evidence, which is tabulated, shows that salt-phenothiazine 14:1 mixture fed *ad libitum* to ewes and lambs gave better results as revealed by rate of growth, marketing data and autopsy findings than any method previously used in West Virginia

for the control of gastro-intestinal parasites. The mass feeding treatment consisted solely of access to the mixture and covered a four-year period. No ill effects were noted. The ewes consumed, on an average, six-tenths of a pound of mixture per ewe per month, which averaged about 18 gm. of phenothiazine per ewe per month. The lambs consumed little or none of the mixture until the last $1\frac{1}{2}$ to 2 months before weaning. A mixture of 19:1 of salt-phenothiazine failed to control gastro-intestinal parasites in ewes or lambs. R.T.L.

615—California Fruit and Grape Grower.

- *a. CONDIT, I. J., 1949.—“Fig rootstocks resistant to the garden nematode.” 3 (11), 7-8.

616—Canadian Field-Naturalist.

- a. RICHARDSON, L. R., 1949.—“The occurrence of the leech *Batrachobdella picta* (Verrill) in the dorsal sub-cutaneous lymph spaces of *Rana catesbeiana*.” 63 (2), 85-86.

(616a) The Hirudinea are rarely endoparasitic. *Batrachobdella picta*, although normally free-living, is now reported from the dorsal subcutaneous lymph space of two out of over 50 specimens of *Rana catesbeiana* from the vicinity of Mille Isles, Province of Quebec. R.T.L.

617—Canadian Journal of Public Health.

- a. BROWN, M., CRONK, L. B., DESINER, F., GREEN, J. E., GIBBONS, J. E. & KUITUNEN-EKBAUM, E., 1949.—“Trichinosis on Southampton Island, N.W.T.” 40 (12), 508-513.
b. KUITUNEN-EKBAUM, E. & FLEMING, Z. W., 1949.—“A note on trichinosis in dogs of the Canadian North.” 40 (12), 514-515.

(617a) During 1947 and 1948 ten Eskimos on Southampton Island, North West Territory, gave histories of illnesses which led to a presumptive diagnosis of trichinosis, based on a high eosinophilia and positive skin and precipitin tests. No biopsies were made. Three out of seven children under one year old gave positive skin reactions. R.T.L.

(617b) *Trichinella spiralis* was found in a dog from Cape Hopes Advance and in one from Devon Island, Dundas Harbour. R.T.L.

618—Časopis Československých Veterinářů.

- a. FREUND, L., 1949.—“Parazitologické úvahy.” 4 (18), 429-430.
b. FREUND, L., 1949.—“Přspěvek k topografické parazitologii.” 4 (19), 447-450.
c. NOVICKÝ, R., 1949.—“Askaridoso vepřů a její tlumení.” 4 (22), 521-524.

(618a) Freund discusses the need for a closer collaboration between the medical and biological aspects of parasitology. He outlines the principles of host-parasite relationship and discusses the mode of migration in the host. C.R.

(618b) Freund in this article gives a list of parasites which might be encountered in the eyes and nose of different animals. The helminths mentioned are *Proalaria spathaceum*, *Cyclocoelum mutabile*, *Hyptiasmus tumidus*, *Trogloremia acutum*, *Cysticercus cellulosae*, *Sparganum mansonii*, *Loa loa*, *Onchocerca caecutiens*, *Setaria equina*, *Filaria sympathica*, *Thelazia callipaeda*, *T. lacrymalis*, *T. gulosa alfortensis*, *T. rhodesi*, *T. leesi*, *Philophthalmus gralei*, *Oxyspirura mansonii*, *Trichinella spiralis*, *Filaroides mustelorum*, *Syngamus nasicola*, *S. laryngeus* and the leech *Hemiclepsis tessellatus*. C.R.

(618c) Novický outlines the life-cycle of *Ascaris lumbricoides* var. *suum* and recommends treatment with chenopodium oil (0.1 c.c. per kg. body-weight followed by 1 c.c. of castor oil or 1.2-1.5 c.c. of mineral oils per kg. body-weight, food withheld 12-24 hours before treatment) or phenothiazine (5 gm. per 8-12 kg. body-weight, 8 gm. per 13-25 kg., 12 gm. per 26-50 kg. and 20 gm. per 51-80 kg., given in food or in gelatin capsules). He recommends cleanliness in pig husbandry as one of the main preventive measures—particularly in the case of farrowing sows. C.R.

619—Ceres. Minas Geraes.

- a. MARTINS, V. A. & FREITAS, M. G., 1949.—“Estudos sôbre a habronemose equina.” 8 (45), 181-187. [English summary p. 185.]

(619a) Martins & Freitas demonstrated gastric infection with *Habronema muscae* in all of 51 army horses stabled at Bello Horizonte, Minas Geraes; 11 horses recently taken there from Rio Grande do Sul, where they had not been kept in stables, were uninfected. Treatment of 19 cases with 40 gm. of phenothiazine and of 6 cases with 300 ml. of a 1% copper sulphate solution was ineffective. The infection was detected by a simplified xenodiagnosis technique: eggs of *Musca domestica* were placed on faeces samples and the resulting flies were examined for *H. muscae* larvae after 7 or 8 days. Under laboratory conditions the larvae survived up to 12 days in faeces. P.M.B.

620—Československá Gynaekologie.

- a. PRÍBRSKÝ, J., 1949.—“Přspěvek k oxyuriasis v gynaekologii.” 28 (11), 712-717. [English summary p. 717.]

621—Chinese Medical Journal. Shanghai.

- a. LING, C. C., CHENG, W. J. & CHUNG, H. L., 1949.—“Clinical and diagnostic features of schistosomiasis japonica. A review of 200 cases.” 67 (7), 347-366.
 b. LING, C. C. & TAUR, S. S., 1949.—“A fatal case of *Clonorchis sinensis* infestation.” 67 (8), 414-420.
 c. LAN, Y. & LIN, C. F., 1949.—“Obstructive jaundice due to *Clonorchis sinensis*.” 67 (12), 657-659.
 d. HUANG, A. C. C., 1949.—“Acute ceco-colic intussusception in adult caused by *Trichuris trichiura* infestation. Report of a case.” 67 (12), 660-661.

(621a) Ling *et al.* report the clinical and laboratory findings in 200 cases of schistosomiasis japonica observed in Shanghai hospitals. The symptoms of 17 early cases and 183 late cases, the gross sigmoidoscopic changes in 46 cases, the physical findings in 183 late cases and the occupation of 200 cases are separately tabulated. The clinical picture is discussed under the headings (i) dysenteric type, (ii) periportal cirrhosis, (iii) splenomegaly, (iv) constitutional symptoms, (v) respiratory form, (vi) appendicitis, (vii) intestinal obstruction, (viii) mesenteric vascular occlusion, (ix) abdominal masses and carcinoma, (x) cerebral type, myelitis and other ectopic lesions, (xi) gastric type with pyloric obstruction, (xii) uterocervical type and (xiii) subclinical type. In serum globulin tests only 35 out of 107 cases gave significantly positive reactions to Sia's or Napier's methods or to both. Tartar emetic was more effective than foudadin. In a single case treated by Alves & Blair's intensive antimony method, death following acute toxic necrosis of the liver occurred on the second day. For success, treatment must be given before there is irreparable damage to the liver and the patient should be protected from reinfection. The nutrition of the patient should be built up before or during treatment. Treatment with tartar emetic must be thorough and be repeated on recurrence of symptoms. During treatment with antimony compounds serial liver function tests must be performed. R.T.L.

(621c) Biliary obstruction caused by *Clonorchis sinensis* is a very rare condition. A case is reported in which cholecystoduodenostomy was performed followed by gastro-jejunostomy. The common bile duct was drained to relieve intrabiliary tension and 450 *C. sinensis* were removed. R.T.L.

622—Chirurg. Berlin.

- a. SCHNEIDRZIK, W. E. J., 1949.—“Akute Bauchsymptome durch einzelne Ascariden.” 20 (11), 623-625.

623—Citrus Industry.

- *a. DUCHARME, E. P., 1949.—“Resistance of *Poncirus trifoliata* rootstocks to nematode infestation in Argentina.” 30 (5), 16-17.

624—Citrus Leaves. Los Angeles.

- a. BAINES, R. C., KLOTZ, L. J., CLARKE, O. F. & DEWOLFE, T. A., 1949.—“New gummosis and nematode treatment.” 29 (8), 13.

(624a) Baines *et al.* carried out a series of warm-water treatments of citrus nursery stock for the control of the citrus root nematode, *Tylenchus semi-penetrans* Cobb, and the fungus *Phytophthora citophthora* (Sm. & Sm.) Leon. They show that it is preferable to treat bare root rather than balled root stock and, after giving details of the various temperatures and times they tested, conclude that citrus plants can be successfully treated by soaking in a warm-water bath maintained at 116°F. for 10 minutes. This also kills the fungus. Treated plants are at once potted in moist sand and care must be taken to prevent the drying of the roots at all times during the course of treatment. T.G.

625—Clinica. Bologna.

- a. MINI, M., 1949.—“Contributo alla conoscenza dell'echinococco del rene.” 11 (6), 414-428.

626—Clínica Contemporânea. Lisbon.

- *a. COELHO, M. F., 1949.—“Diagnóstico laboratorial da oxiuriasse pelo método do tampão anal N.I.H.” 3 (22), 1232-1235.
b. RAVARA ALVES, L. & COITO, A. DE M., 1949.—“Encontram-se extintos os focos de bilharziose vesical endêmica no Algarve? Sobre dois casos de bilharziose vesical oriundos desta provincia.” 3 (23), 1283-1288.

627—Communications de la Faculté des Sciences de l'Université d'Ankara.

- a. ŞENGÜN, A., 1949.—“Über das Verhalten der Chromosomen in den wachsenden Oocyten von *Ascaris megalocephala univalens*.” 2, 89-109.
b. GELDİAY, R., 1949.—“Etude comparée sur les formes macroscopique et microscopique du barrage de Tchoubouk et du lac d'Emir (voisinage d'Ankara).” 2, 151-199.

(627b) A list of organisms identified from the Tchoubouk dam and the Emir Lake near Ankara includes *Hirudo medicinalis* and *Placobdella catenigera*. P.M.B.

628—Deutsche Medizinische Wochenschrift.

- a. DANNIGER, 1949.—“Therapeutischer Vorschlag zur Behandlung der Oxyuriasis.” 74 (40), 1208-1209.
b. JOCHIMS, J. & WREDE, I., 1949.—“Über Zwischenfälle bei der Askaridenkur mit Bedermin.” 74 (43), 1308-1309.
c. LEICK, G., 1949.—“Die Häufigkeit des Vorkommens von *Oxyuris vermicularis*.” 74 (49), 1507-1510.

(628a) Danniger obtained a complete cure of enterobiasis by inserting a greased absorbent cotton plug into the anus almost as far as the rectum each evening for 10-14 days and leaving it in position overnight. Reinfection was thus prevented and many worms were removed. No other form of treatment was required. P.M.B.

(628b) Jochims & Wrede describe four cases (two of which were fatal) of severe poisoning in children ascribed to the use of Bedermin (ascaridol with carbon tetrachloride) in the treatment of ascariasis. Inquiries showed that the capsules used were probably from ten to fifteen years old and it is thought that decomposition products of carbon tetrachloride were responsible for the symptoms. A.E.F.

(628c) Leick reviews earlier literature on the incidence of *Enterobius vermicularis* infection and notes the wide variation in the figures given. He then reports a series of 1,000 post-mortems carried out by himself at Greifswald. Of 210 children, 472 adult males and 318 adult females, respectively 123 (58.6%), 160 (33.9%) and 130 (30.9%) were infected with *Enterobius vermicularis*. Infection was more frequent in working class than among professional people. Infection was found to be at its maximum in November - January and its minimum in April - June. A.E.F.

629—Deutsche Pelztierzüchter (Der).

- *a. SCHMIDT, F., 1949.—“Zur Frage der Entwurmung unserer Füchse.” 23, 72-73.
- *b. SCHOOP, G., 1949.—“Ueber die Entwurmung der Füchse.” 23, 123-126.

630—Deutsche Wirtschaftsgeflügelzucht.

- *a. WENGER, G., 1949.—“Wurmschäden bei unsern Hühnern.” 2, 20.

631—Día Médico. Buenos Aires.

- a. BADANO REPETTO, J. L., 1949.—“Tratamiento del quiste hidático del pulmón.” 21 (71), 2802-2809.

632—Documenta Neerlandica et Indonesica de Morbis Tropicis.

- a. LIE KIAN JOE, 1949.—“A case of gnathostomiasis in Indonesia.” 1 (4), 368-370.

(632a) Lie Kian Joe reports a case of gnathostomiasis in man in Indonesia. The worm closely resembled *Gnathostoma spinigerum*, was immature and was probably a male.
S.W.

633—Dokladi Akademii Nauk SSSR.

- a. GRUNIN, K. Y., 1949.—[A deviation in instinct during parasitic castration in *Prosimulium hirtipes* Fries (Diptera, Simuliidae).] 66 (2), 305-307. [In Russian.]
- b. BOROVITSKAYA, M., 1949.—[On parasitic leeches of the family Ichthyobdellidae occurring in the pallial cavity of cephalopod molluscs.] 68 (2), 425-427. [In Russian.]

(633a) Grunin observed among *Prosimulium hirtipes* which were laying eggs above water that some, while appearing to be laying eggs, were in fact producing through the sexual opening a nematode reaching 1 cm. in length. The nematode larvae attack the larvae of *P. hirtipes*. Grunin caught 76 specimens of *P. hirtipes* and found that of 69 females, 56 contained eggs and 13 the nematode; among six males, four were infected. In Grunin's opinion females sterilized by worms behave normally and fly to the places of oviposition, where they lay worms instead of eggs. Females taking a blood meal were free from infection when examined.
C.R.

(633b) Borovitskaya describes and illustrates *Crangonobdella achmerovi* n.sp. from the pallial cavity of cephalopods and contrasts it with *C. murmanica*.
R.T.L.

634—Entomologist's Monthly Magazine.

- a. OMER-COOPER, J., 1949.—“Does destruction of water insects cause increase of trematode disease?” 85, 157-158.

(634a) Instances are given of the great natural increase in the fresh-water molluscan fauna which may result from spraying for the destruction of insects. It is pointed out that this increase of molluscan vectors may be followed by an increase in the trematode infections of man and domesticated animals.
R.T.L.

635—Enzymologia.

- a. GREMBERGEN, G. VAN, 1949.—“Le métabolisme respiratoire du trématode *Fasciola hepatica* Linn., 1758.” 13 (5), 241-257. [English summary p. 257.]
- b. GREMBERGEN, G. VAN, DAMME, R. VAN & VERCRUYSE, R., 1949.—“Le métabolisme respiratoire du nématode *Ascaris lumbricoides*.” 13 (6), 325-342. [English summary pp. 341-342.]

(635a) Van Grembergen, studying the respiratory mechanism of *Fasciola hepatica* finds that his results differ only quantitatively from those obtained for *Moniezia benedeni*. [For abstract see Helm. Abs. 14, No. 381a.] He does not agree with the results obtained by Harnisch. Oxygen consumption of both whole fluke and Latapie-brei was studied, the latter proving most satisfactory. The uptake is independent of the oxygen tension.

Glucose, alanine and lactic acid have little or no influence; α -glycerophosphoric acid, glutamic acid, methylene blue, 2,4-dinitrocyclopentyl-phenol (concentration 10^{-5}), 2,4-dinitrophenol (concentration 10^{-5} to 10^{-4}) stimulate oxygen consumption. Succinic acid stabilizes respiration and increases the activation effect of the dinitro compounds. Malic acid, malonic acid, ethylurethane, potassium cyanide, carbon monoxide and higher concentrations of the dinitro compounds have an inhibiting effect. Methylene blue checks the effect of potassium cyanide. Van Grembergen has also demonstrated the presence of cytochrome, a typical cytochrome-oxidase, flavins and haemoglobin with myoglobin-like characters. s.w.

(635b) Van Grembergen *et al.* from their study of *Ascaris lumbricoides* and other work conclude that the parasitic nematodes have a unique respiratory mechanism. They find that oxygen consumption is dependent on oxygen tension. Glucose, lactic acid, citric acid, α -glycerophosphate, glutamic acid, alanine and 2,4-dinitrophenol (concentration 10^{-4} and 10^{-5}) have no effect. Succinic acid only stimulates respiration in the Latapie-brei. Methylene blue causes stimulation which is more marked in the presence of succinic acid. Ethylurethane and carbon monoxide inhibit respiration. M/100 potassium cyanide and sodium azide cause an initial stimulation followed by strong inhibition. This is attributed to the combination of potassium cyanide and sodium azide with ketones which are themselves inhibitory. A typical cytochrome-oxidase is present. s.w.

636—Experientia. Basle.

- a. WEILER, P., 1949.—“Untersuchungen über antibiotische Wirkungen an Blutegeln, Blutegelbakterien und deren keimfreien Filtrat.” 5 (11), 446-447. [English summary p. 447.]

(636a) *Hirudo medicinalis* is shown to be capable of weakening pathogenic organisms to such an extent as to result in the complete loss of their infectivity. This weakening can also be effected immediately by treatment with leech bacilli or with germ-free filtrates of cultures of *Bacillus hirudinis*. R.T.L.

637—Farmaco. Pavia.

- a. AMOROSA, M., 1949.—“Le diamidine nella terapia delle bilharziosi e delle leishmaniosi, e la 4-amidinbenzensolfamide. Nota 1.” 4 (3), 290-299. [English summary p. 290.]

(637a) This first part of Amorosa's article deals solely with the chemistry of diamidine which has recently been used in the treatment of schistosomiasis. R.T.L.

638—Finska Läkaresällskapets Handlingar.

- a. GYLLING, B., 1949.—“Den geografiska utbredningen av *Diphyllbothrium latum* i Finland.” 92 (1), 38-48.

(638a) Gylling has drawn up a map showing the incidence of *Diphyllbothrium latum* in different parts of Finland. It is based on cases of tapeworm in the Finnish forces during the war 1941-1944. There were many more cases in the east of Finland than in the west. S.B.

639—Flugblatt. Biologische Zentralanstalt Braunschweig.

- a. GOFFART, H., 1949.—“Das Stock- oder Stengelälchen.” No. D10, 6 pp.
b. GOFFART, H., 1949.—“Rüben-, Hafer- und Kartoffelnematoden.” No. F2, 8 pp.

(639a) In this agricultural leaflet Goffart gives a brief account of the stem eelworm, *Ditylenchus dipsaci*, and of some of the more serious diseases it causes on crops including winter rye, oats, buckwheat, red clover, lucerne, potato and onion. Among other illustrations there is a good photograph of a twisted potato stem infested with a race of the parasite which occurs in Germany. The spread of the eelworm and methods for its control are discussed. T.G.

(639b) In this leaflet Goffart deals separately with beet, oat and potato root nematodes. For each species he gives the life-history, host plants, effects on the principal host, means of spread and control measures. No effective chemical means of control are known but crop rotation is advised in each case. M.T.F.

640—Folha Medica. Rio de Janeiro.

- a. SANTOS, J. P., 1949.—“Frequencia das parasitoses intestinais em Copacabana.” 30 (23), 186–187.

641—Folia Pharmaceutica. Istanbul.

- a. BAYTOP, Ö. T., 1949.—“*Ammi visnaga* Lamk. meyvalarından elde edilen sulu hülâsaların yer solucanları üzerindeki tesirleri.” 1 (3), 32–36. [French summary p. 32.]
 b. BAYTOP, Ö. T., 1949.—“Khellin'in yer solucanlarına tesiri hakkında.” 1 (4), 48–49. [French summary p. 48.]

(641a & b) An aqueous extract of the fruits of *Ammi visnaga*, known as a vermifuge in the Adana district of Turkey, had a paralysing and subsequently lethal effect on earthworms. The active principle is Khellin. P.M.B.

642—Forschungen und Fortschritte.

- a. SCHUBERT, R., 1949.—“Spulwurmverseuchung, ihre Bedeutung und Eindämmung.” 25 (3/4), 41–45.

643—Friuli Medico. Udine.

- a. BISARO, A., 1949.—“Sulla cisticercosi cerebrale.” 4 (3), 177–197.

644—Fruit and Vegetable Review.

- *a. ALLARD, R. W., 1949.—“Westan variety is resistant to root-knot nematodes in lima beans.” 9 (12), 15.

645—Gaceta Médica Española.

- a. CARRERAS, M., 1949.—“Cuadros clínicos provocados por la ingestión de sanguijuelas con el agua de bebida.” 23 (12), 469–470.

(645a) Carreras summarizes the various methods used in simple cases for removing leeches which have been ingested with drinking water. These include the application of vinegar and salt, chloroform, tobacco smoke or 5% gomenol, or the inducement of vomiting; cocaine is not recommended. Three cases in which diagnosis and treatment were difficult are described: (i) a leech was removed from the nasopharyngeal cavity; (ii) a leech was located in the upper part of the oesophagus and when dislodged was swallowed, with no further ill effects; (iii) a leech attached to one of the vocal cords caused great difficulty in breathing until it was removed. Carreras comments that patients are frequently unaware of having swallowed a leech, even when severe haemorrhage occurs. P.M.B.

646—Gaceta Veterinaria. Buenos Aires.

- a. GELORMINI, N., 1949.—“Hidatidosis cardíaca en los animales.” 11 (60), 203–210.

647—Ganado.

- *a. RIVERA, S., M., 1949.—“Distomatosis hepática.” 3 (13), 39–40; (14), 12–13; (15), 63; (16), 46–47.

648—Gastroenterologia.

- a. FRIEDRICH, L. v., 1949.—“Ein Fall von *Anguillula intestinalis*.” 74 (3), 150–156. [English & French summaries pp. 155–156.]

(648a) A case in which there were diarrhoea and symptoms suggestive of gall-stones showed an eosinophilia of 52% and *Strongyloides stercoralis* larvae in the duodenal secretion and in the faeces. A single dose of tetrachlorethylene effected a complete cure. The symptoms are believed to be due to a duodenitis and an associated dyskinesia of the gall-bladder.

R.T.L.

649—Gazeta Médica Portuguesa.

- a. MORAIS, J. R. B. DE, 1949.—“Tratamento cirúrgico da hidatidose pulmonar.” 2 (2), 363–379. [English & French summaries p. 379.]
 b. LOPES SOARES, E., 1949.—“A anestesia num caso de quistectomia por quisto hidático do pulmão.” 2 (4), 1025–1027.

650—Geflügelhof.

- *a. WENGER, G., 1949.—“Neuere Erfahrungen in der Wurmbekämpfung bei Hühnern.” 12, 259–261.
 *b. SAXER, E., 1949.—“Ueber Darmparasiten beim Hausgeflügel.” 12, 568–570.

651—Giornale Italiano di Oftalmologia.

- *a. WIRTH, A. & BEVACQUA, R., 1949.—“Cisti parassitaria dell'orbita da filaria.” 2, 225–230.

652—Groenten en Fruit.

- *a. SCHENK, P. J., 1949.—[Potato degeneration from nematodes in soils.] 5, 381. [In Dutch.]

653—Hassadeh.

- a. SHWEIG, K., 1949.—[Experiments in the control of nematodes in the garden by means of D.D.] 30 (2/3), 73–77. [In Hebrew.]

654—Hôpital. Paris.

- a. JEANBRAU, E., 1949.—“Trois taenifuges efficaces sous tous les climats.” 37 (579), 204–205.

655—Hospital. Rio de Janeiro.

- a. CARVALHO, J. D. DE, 1949.—“Avaliação da intensidade da ancilostomose no Município de Antonina.” 36 (5), 739–755.

(655a) The average incidence of hookworm was 78.1% in the district of Antonina in Paraná State, Brazil, 84.9% in the rural area and 61.8% in the urban area. P.M.B.

656—Indian Journal of Malariology.

- a. RAGHAVAN, N. G. S. & KRISHNAN, K. S., 1949.—“Some observations on the prevalence of malaria and filariasis in Sri Harikotta Island, Nellore, Madras Presidency.” 3 (1), 39–56.
 b. RAGHAVAN, N. G. S. & MISRA, B. G., 1949.—“A preliminary note on experimental infections of avian malaria and sauroptid filariasis in *C. fatigans* Weid., 1828.” 3 (2/3), 243–247.
 c. RAGHAVAN, N. G. S. & KRISHNAN, K. S., 1949.—“A note on experimental infections of *Mf. malayi* Brug in *C. fatigans* and *A. stephensi* (type).” 3 (2/3), 249–252.

(656a) Raghavan & Krishnan have made a survey of Sri Harikotta Island, Madras Presidency, where malaria is hyperendemic and filariasis endemic. Of the 3,900 inhabitants, 927 were examined for any evidence of disease, but only 709 exhaustively. Microfilariae of *Wuchereria bancrofti* were found in 175 persons, and disease manifestations in 102. A total of 259 persons showed filarial disease or infection or both. Seven cases with microfilariae and four with elephantoid conditions were also infected with malaria. Mosquitoes of 18 species were examined and *Mansonioides annulifera* and *M. uniformis* were found to be infected with filariae, and *Anopheles culicifacies* with malarial parasites, but no mixed

infection was found in the mosquitoes. Experimental infection of mosquitoes with filariae was successful only in *M. annulifera*. S.W.

(656b) Starved *Culex fatigans* after being fed overnight on sparrows naturally infected with *Plasmodium praecox* were allowed to feed on lizards (*Calotes versicolor*) naturally infected with microfilariae of *Conspicuum guindiensis*. A second batch of mosquitoes was fed in the reverse order. The tabulated results show that there is no antagonism between avian malaria and reptilian filaria when developing simultaneously in the same mosquito intermediary. R.T.L.

(656c) It is confirmed that *Culex fatigans* and *Aedes stephensi* are very susceptible to experimental infection with *Microfilaria bancrofti* and that *C. fatigans* is refractory to *Mf. malayi*. It is now shown that *Aedes stephensi* is also refractory to *Mf. malayi*. It is suggested that this might be used as a diagnostic technique to distinguish between *Mf. bancrofti* and *Mf. malayi*. In experimental infections *Mf. malayi* developed normally in *Mansonioides annulifera*, its natural vector. R.T.L.

657—Indian Journal of Medical Sciences.

- a. SOMASUNDARAM, P., 1949.—“A filarial survey of Palacole town.” 3 (7), 421-432.

(657a) Of 5,957 persons examined in Palacole, Madras Presidency, 474 (7.95%) showed signs of filariasis which in 76.6% of cases was manifested by elephantiasis of the leg; 63% of those affected were females. The maximum incidence occurred in the age group 36 to 40. Examination of night blood gave 14.9% positive in 556 individuals. The microfilariae are thought to be those of *Wuchereria bancrofti*. The chief insect vector is *Mansonioides* sp., of which 12.4% were positive out of 250 dissected. Only 2.1% of *Culex fatigans* were positive of 48 dissected. The *Mansonioides* larvae bred chiefly in public and private water tanks, and whenever *Pistia stratiotes* was present breeding was profuse. J.J.C.B.

658—Indian Journal of Pharmacy.

- a. KHORANA, M. L. & MOTIWALA, D. K., 1949.—“Anthelmintics. Anthelmintic activity of Kamala and its constituents.” 11 (2), 37-43.

(658a) As judged by *in vitro* tests on earthworms, rottlerin and *iso*-rottlerin alone out of five constituents separated from Kamala showed “anthelmintic” activity. A mixture of equal parts of rottlerin and *iso*-rottlerin was more active than either of these alone. The time required to kill did not vary in proportion to the concentration of the chemicals. Kamala, which contains *iso*-rottlerin, should not be heated in preparing solutions for comparison as *iso*-rottlerin is more toxic to earthworms than rottlerin. Rottlerin and *iso*-rottlerin are comparatively weak in comparison with synthetic anthelmintics but are quite comparable with oil of chenopodium, santonin and other drugs of vegetable origin. R.T.L.

659—Japanese Journal of Veterinary Science.

- *a. KUME, S. & ITAGAKI, S., 1949.—“Studies on *Dirofilaria immitis* II. Observations on the life-cycle in the dog as the final host.” 11, 13-24.

660—Jornal de Medicina de Pernambuco.

- *a. PARAHYM, O., 1949.—“Entrevista sobre esquistossomíase.” 45 (7), 361-363.

661—Jornal do Médico. Oporto.

- a. COSTA MAIA, C. DA, 1949.—“Parasitismo humano por *Strongyloides stercoralis* em território português. (Notas sobre 54 casos autóctones da Metrópole.)” 14 (339), 91-101. [English & French summaries p. 101.]

(661a) The cases of *Strongyloides stercoralis* seen by the author are believed to be

the first observed in Madeira. In most of the cases other roundworms were also present. Of 6,287 persons examined in Madeira between 1944 and 1948, 0.85% had *Strongyloides* and 7.95% had hookworm.

R.T.L.

662—Journal of the American Pharmaceutical Association. Scientific Edition.

- a. FODEN, R. H., HONDA, P. H. & EDWARDS, L. D., 1949.—“Screening tests of certain new organic fluorine compounds for ascaricidal and ascaristatic activities.” 38 (10), 570-571.

(662a) Twenty-four organic fluorine compounds were tested for anthelmintic activity against *Ascaris lumbricoides* of swine by the Lamson & Brown method. Many of the compounds appeared to be as effective *in vitro* as sodium fluoride. The most active ascaricide was 3-(trifluoromethyl)phenol, approximating very closely to hexylresorcinol. A modification of Baldwin's method showed ascaristatic activity in 4-hydroxy-4-(trifluoromethyl)-1,1,1,7,7,7-hexafluoroheptane. Less effective were perfluoroglutarimide, trichlorodifluoro-(trifluoromethyl)benzene, and 3-chloro(trifluoromethyl)benzene.

R.T.L.

663—Journal of Animal Science.

- a. WARWICK, B. L., BERRY, R. O., TURK, R. D. & MORGAN, C. O., 1949.—“Selection of sheep and goats for resistance to stomach worms, *Haemonchus contortus*.” [Abstract of paper to be presented at 41st Annual Meeting of the American Society of Animal Production, Chicago, November 25 and 26, 1949.] 8 (4), 609-610.

(663a) Experiments on resistance to *Haemonchus contortus* extending over a period of nine years have indicated the existence in sheep of polygenes of very low individual importance which make necessary an intensive selection on both sides of the pedigree. In goats there is a much higher level of plus genes with possibly true dominance for resistance. Some of the animals selected for resistance are approaching standard levels of production of wool and mohair.

R.T.L.

664—Journal of the Australian Institute of Agricultural Science.

- a. BROCK, R. D. & GILES, J. E., 1949.—“Control of root-knot nematode in tomatoes by soil fumigation.” 15 (3/4), 154-158.

(664a) Brock & Giles have investigated the differences in yield of fruit and in infestation with *Heterodera marioni* in tomatoes, as between seed-bed and plot treatment with D-D mixture. The four treatments (injection of neither, either, or both seed-bed and plot) were replicated in five Latin squares, at Red Cliffs, Victoria. Whilst, with fumigated plots, the fumigation also of the seed-bed led to a reduced infestation on the tomato roots, yet the main effect, on both yield and infestation rate, was that plot fumigation is far more important than seed-bed fumigation; indeed the latter is vain unless the plots also have been treated.

B.G.P.

665—Journal of the Colorado-Wyoming Academy of Science.

- †a. OLSEN, O. W., 1949.—“Incidence of helminth parasites in beavers from the Platte River in Weld County, Colorado.” 4 (1), 64.
 †b. OLSEN, O. W., 1949.—“Male of the deer pin worm, *Skrjabinema parva*.” 4 (1), 64.
 †c. OLSEN, O. W., 1949.—“Colorado bighorn sheep a new host of the sheep pin worm, *Skrjabinema ovis*.” 4 (1), 64-65.
 †d. OLSEN, O. W., 1949.—“Emendation of the description of the male of *Ostertagia bisonis* with a note on its occurrence in cattle.” 4 (1), 65.

(665a) *Stichorchis subtriquetrus*, *Travassosius americanus* and *Castrostrongylus castoris* are reported from beavers in Colorado.

R.T.L.

(665b) The male of *Skrjabinema parva* is now described. It is 2 mm. long. The

† Abstract of paper presented at the 20th Annual Meeting of the Colorado-Wyoming Academy of Science, 1949.

single spicule is shorter than in *S. ovis* and *S. oreamni* and measures $62-67\mu$ with a goblet-shaped proximal end. The gubernaculum is $10-13\mu$ in length. R.T.L.

(665d) *Ostertagia bisonis* is reported from cattle in Colorado for the first time. The male is shown to possess a gubernaculum about 24μ long. R.T.L.

666—Journal of the Department of Agriculture. Dublin.

- a. ANON., 1949.—"Report on treatment of cattle in Loop Head Peninsula." 46, 16-21.

(666a) In the Loop Head Peninsula, County Clare, Republic of Ireland, mortality among cattle has now reached most serious proportions due mainly to ever-increasing infection with gastro-intestinal helminths causing scouring and pining, "husk" worms and liver-fluke causing pining and frequently death. Between 31st August and 24th September, 1948, 3,189 cattle, forming 68.84% of all the cattle on 324 holdings, were treated with phenothiazine for gastro-intestinal worms and with hexachlorethane for fluke. The animals with "husk" did not receive any special treatment other than phenothiazine at 14-day intervals; calves were housed and given increased rations. The scouring in calves was probably of dietetic origin. The land in general is marshy, badly drained and often overrun with ragwort. The hay is of poor quality with a high ragwort content. Little lime and no farmyard manure are used on the pastures. R.T.L.

667—Journal of the Egyptian Public Health Association.

- *a. AZIM, M. A., 1949.—[Report on the treatment of main streams infected with snails by the sulphatation of their shore waters.] 24 (1), 27-36. [In Arabic: English summary.]

668—Journal of Experimental Zoology.

- a. NIGON, V. & DOUGHERTY, E. C., 1949.—"Reproductive patterns and attempts at reciprocal crossing of *Rhabditis elegans* Maupas, 1900, and *Rhabditis briggsae* Dougherty and Nigon, 1949 (Nematoda: Rhabditidae)." 112 (3), 485-503.

(668a) Nigon & Dougherty give an illustrated description of the differences found between *Rhabditis elegans* and *R. briggsae* both of which have hermaphroditic females and very rare males. Attempts to hybridize the two species were made by reciprocal mating of males and hermaphrodites of the two species but were consistently unsuccessful and it is inferred that they are morphologically and functionally distinct. T.G.

669—Journal Français de Médecine et Chirurgie Thoraciques.

- a. LE MELLETIER, J., LEMOINE, J. & FRANCHET, 1949.—"Infiltrats pulmonaires labiles récidivants et erratiques avec éosinophilie sanguine tardive. Ascaridiose et trichocéphalose associées." 3 (4), 322-326.

670—Journal of the Indiana State Medical Association.

- a. SCOTT, I. H. & SCOTT, G. D., 1949.—"Echinococcus cyst of the liver. Two proven case reports and one suspected case report." 42 (5), 434-435.

671—Journal of the International College of Surgeons.

- a. NISIO, G., 1949.—"Dysuria due to retrovesical echinococcus cyst." 12 (6), 855-856. [French, Spanish & Italian summaries p. 856.]

672—Journal of the Japanese Veterinary Medical Association.

- a. KUME, S., 1949.—[Can lumbar paralysis caused by *Filaria digitata* be prevented?] 2 (7), 193-195. [In Japanese.]

673—Journal de Médecine de Bordeaux et du Sud-Ouest.

- a. CREYX, M., LÉVY, J., PAUTRIZEL, R., VINCEDEAU, J. & LIBERSAT, G., 1949.—“Sur un cas complexe d'ascaridiose.” 126 (10), 506.
- b. SIGALAS, R., PAUTRIZEL, R. & BAILANGER, J., 1949.—“Association de différentes manifestations anaphylactiques chez un porteur d'ascaris.” 126 (12), 625–626.
- c. SIGALAS, R., PAUTRIZEL, R. & NOGUÈS, C., 1949.—“Etude du parasitisme intestinal chez les enfants de la région bordelaise.” 126 (12), 626–628.

(673b) A 37-year-old woman frequently passed ascaris; after about four years sub-occlusion of the intestine occurred which yielded to treatment with Spasmalgine. A similar manifestation a year later was followed after two years by a syndrome of ascaridian meningitis which disappeared after the expulsion of more ascaris. During the following year recurring urticaria and oedema were frequently followed by the passing of ascaris. Treatment with various anthelmintics was unsuccessful, owing apparently to frequent reinfection. P.M.B.

(673c) Examination of faeces from 120 children in the Bordeaux region gave the following incidence of helminth infections: *Ascaris* 25.66%, *Enterobius* 54.54% and *Trichuris* 61.06%. There was one case with *Taenia saginata*. Two instances of pseudo-parasitism with *Dicrocoelium dendriticum* following the eating of infected liver are reported.

R.T.L.

674—Journal of the National Malaria Society. Columbia, South Carolina.

- a. TOMLINSON, Jr., T. H., FOGG, V. H. & SMITH, C. S., 1949.—“Parasites found in certain Sciuridae of the southwestern United States.” 8 (3), 202–205.

(674a) Blood films taken from squirrels in south-west Texas and south-east Oklahoma showed microfilariae in 23 out of 140 *Sciurus niger*, in 7 out of 29 *S. carolinensis* and in 2 out of 28 *Citellus mexicanus parvidens*.

R.T.L.

675—Journal of Parasitology.

- a. CHIN, T.-H., 1949.—“Further note on leech infestation in man.” 35 (2), 215.
- b. MEYER, M. C., 1949.—“On the parasitism of the leech, *Piscicola salmositica* Meyer, 1946.” 35 (2), 215.

(675a) Ta-Hsiung Chin quotes a personal communication from Professor J. P. Moore, University of Pennsylvania, identifying specimens of *Dinobdella ferox* from Lotien, Kweichow Province, and Chaotung, Yunnan Province, China. This leech is widely distributed in India, Burma, south-east China and Formosa and is a serious pest of domestic and some wild animals. It is known to lodge itself in the air passages in man. Chin adds that this species seems to be widely spread south of the Yangtze River.

R.T.L.

(675b) The name of the steelhead trout given by Meyer in 1946 as host of *Piscicola salmositica* is corrected to *Salmo gairdnerii gairdnerii*. As *P. salmositica* is not a permanent or host-specific parasite and as all the salmon of the Pacific Coast belong to the genus *Oncorhynchus*, he lists *O. kisutch*, *O. tshawytscha* and *O. keta* as additional hosts.

R.T.L.

676—Journal of Pathology and Bacteriology.

- a. JAMIESON, S., 1949.—“The identification of *Clostridium oedematiens* and an experimental investigation of its role in the pathogenesis of infectious necrotic hepatitis (‘black disease’) of sheep.” 61 (3), 389–402.

(676a) *Clostridium oedematiens* type B is the cause of “black disease” of sheep in Scotland. Immature *Fasciola hepatica*, in their wanderings in the liver, activate the latent spores in necrotic foci.

R.T.L.

677—Journal of the Philippine Medical Association.

- a. PESIGAN, T. P., PANGILINAN, M. V. & SARMIENTO, A. P., 1949.—“Studies on schistosomiasis: further surveys in Mindanao.” 25 (9), 417-433.

(677a) This fourth report on the distribution of schistosomiasis japonica in the island of Mindanao proves that this infection is present in all the provinces of the island including possibly Oriental Misamis. During a period of two months survey parties visited the provinces of Bukidnon, Cotabato, Davao, Lanao and Zamboanga. New endemic foci were discovered at Sitio Simaya (Bukidnon), Mactan (Davao Penal Colony), Calinan (Davao City), Tamparan and at Barrio Salug (Aurora) and Barrio Nipaon (Dipolog) in south-eastern and northern Zamboanga respectively. *Oncomelania quadrasi* were collected at all these places and also at Ragain, Kapatagan and Isis. R.T.L.

678—Journal de Radiologie et d'Électrologie.

- a. SMYRNIOTIS, P. C., 1949.—“Vingt-quatre années de radiodiagnostic de la bilharziose en Égypte.” 30 (9/10), 514-517.
b. DÉJOU, L., CHIOZZA, P. & LASCEVE, 1949.—“Lymphographie de varices filariennes du cordon spermatique.” 30 (11/12), 623-624.

(678a) The history of the diagnosis of schistosomiasis in Egypt by X-ray examination is briefly summarized. Smyrniotis gives short notes of six cases illustrated by hydrocystograms obtained by a method published by him in *Congr. int. Méd. trop.*, Cairo, 4 (1928), pp. 425-483. R.T.L.

(678b) In a case of filarial varices of the spermatic cord an injection of “ténébryl” made it possible to obtain a radiograph of the testicular lymphatic ducts as far as the abdomino-aortic ganglion. R.T.L.

679—Journal of the Royal Faculty of Medicine of Baghdad, Iraq.

- a. WATSON, J. M., ZAHAWI, S. AL, NAJI, A. F. & MURTADHA, M., 1949.—“Studies on bilharziasis in Iraq. Part III. Pulmonary bilharziasis.” 13 (6), 154-171.

(679a) After reviewing earlier publications on chronic pulmonary bilharziasis, four case histories are given from Iraq. Of these, three are typical examples of bronchopulmonary bilharziasis. In one, pulmonary tuberculosis was a complication. That the incidence of chronic pulmonary bilharziasis is not high is borne out by statistics from the Central Pathological Institute in Baghdad for in 1942-1944 only 2.6% of bilharzia cases showed lung infection. In studies on 109 tuberculous patients in the Isolation Hospital, Baghdad, 13 cases were found to have urinary bilharziasis and of these two gave some indications of pulmonary bilharziasis but there was no evidence of any direct association between these two lung infections. R.T.L.

680—Journal of the South Carolina Medical Association.

- a. HOLLIFIELD, W. C. & WILSON, Jr., R., 1949.—“Echinococcus infection. Report of a case in an immigrant in South Carolina.” 45 (12), 359-361.
b. ARNOLD, J. H., 1949.—“The public health problems of hookworm disease in South Carolina.” 45 (12), 367-369.

681—Journal of the University of Bombay. Section B, Biological Sciences.

- a. KARVE, J. N., 1949.—“Parasitic nematodes from an agamid lizard, *Agama tuberculata* Gray.” 18 (3), 1-16.

(681a) Descriptions are given of *Thelandros baylisi* from *Uromastix hardwickii* and two new species from *Agama tuberculata*, viz., *T. himalayana* n.sp. which is larger than *T. taylori* and has a peculiar posterior lip to the cloaca and a prepuce-like cuticular sheath enveloping the posterior end of the male, and *T. almoriensis* n.sp. which closely resembles

T. cinctus and *T. kasauli* but the cloaca possesses a denticulated anterior lip and there are four pairs of caudal papillae.

R.T.L.

682—Journal d'Urologie Médicale et Chirurgicale.

- a. GALLIARD, H. & HUARD, P., 1949.—"Hémato-chylo-lymphurie avec microfilaires dans le sang. Insuffisance rénale correspondante. Néphrectomie. Présence de filaires adultes dans les pièces opératoires. Guérison." 55 (5/6), 392-395.
- b. CHAUVIN, E. & CHAUVIN, H. F., 1949.—"Kyste hydatique du rein chez une enfant de huit ans. Présentation de pièces." 55 (5/6), 430.
- c. TRUC, 1949.—"A propos de la thérapeutique chirurgicale des kystes hydatiques du rein." 55 (5/6), 431.
- d. MARTIN-LAVAL, 1949.—"Le rôle des oxyures dans certaines affections génito-urinaires." 55 (5/6), 434-436.

(682d) *Enterobius vermicularis* may cause ano-vulvar pruritus, vulvo-vaginitis and nocturnal incontinence. Clinical data are given of two instances of urethritis and pseudocystitis attributed to enterobius infection.

R.T.L.

683—Journal of Urology.

- a. MURRAY, D. E., 1949.—"Genito-urinary aspects of early filariasis." 61 (5), 967-971.

(683a) The early clinical symptoms of filariasis shown by 200 American troops stationed in Samoa, Fiji, Guadalcanal, and by most of those in Bora-Bora, appeared after 6 to 8 weeks. The first symptoms consisted of mild pain, swelling or redness of arm or leg or mild discomfort and swelling in the scrotal region. The syndromes fell into three categories (i) lymph-node enlargement, (ii) lymphangitis of limb or trunk, (iii) acute inflammation of the scrotal contents. A constant and diagnostic feature was the retrograde or centrifugal method of spread of the lymphangitis. In 65% of the genito-urinary cases there was adenopathy of the epitrochlear gland. In all cases there was inflammation of the spermatic cord, testis or scrotum with funiculitis and epididymitis. Glands obtained by tissue biopsy showed granulomatous inflammation, marked tissue eosinophilia and hyperplasia of the reticulo-endothelial tissue.

R.T.L.

684—Journal of Wildlife Management.

- a. ERICKSON, A. B., HIGHBY, P. R. & CARLSON, C. E., 1949.—"Ruffed grouse populations in Minnesota in relation to blood and intestinal parasitism." 13 (2), 188-194.
- b. McLURE, H. E., 1949.—"The eyeworm, *Oxyspirura petrowi*, in Nebraska pheasants." 13 (3), 304-307.

(684a) The relative frequency of the 12 species of helminths found in 231 ruffed grouse in Minnesota from 1941 to 1947 was: *Ascaridia bonasae* 37.6%, *Cheilosporira spinosa* 4.7%, *Heterakis gallinae* 0.43%, *Oxyspirura petrowi* 0.49%, *Microfilaria* sp. 4.3%, *Brachylaemus fuscatus* 8.6%, *Echinoparyphium aconiatum* 0.86%, *Lyperosomum monenteron* 0.49%, *Choanotaenia infundibulum* 1.3%, *Davainea proglottina* 10%, *Hymenolepis* sp. 2.1% and *Raillietina tetragona* 6%. There was no indication that worm infections were building up as grouse populations were declining.

R.T.L.

(684b) *Oxyspirura petrowi*, which has a circumpolar distribution, has been found in the eye of 40% *Phasianus colchicus torquatus* accidentally killed along the highways in north-central Nebraska. The number of worms per eye averaged two. The arthropod intermediary is unknown but it is suggestive that between October and April a bibionid fly larva made up 5.76% of the volume of the diet and throughout the year, except in December and January, a grasshopper, *Melanoplus mexicanus* formed 4.67%.

R.T.L.

685—Kinderärztliche Praxis.

- a. FINKIEWITZ, H. J., 1949.—“Über die Beeinflussbarkeit der Enterobien durch Sulfaguanidin.” 17 (9/10), 280–285.

(685a) Finkewitz has tested sulphaguanidine (in the form “Ruocid” Chemiewerk Homburg) as an anthelmintic against *Enterobius*. The drug had no effect *in vitro* either on length of life or on the mobility of larvae. Tests on 26 children aged from 2 to 14 years, and who were given doses varying between 4 gm. spread over 3 days and 12 gm. spread over 5 days according to age, showed no results in 22 cases. In three cases worms disappeared but this is believed not to have been a result of the sulphaguanidine treatment. The remaining case did not report for re-examination. Finkewitz concludes that the drug is useless against *Enterobius*. A.E.F.

686—Kleintier-Züchter. Tierbörse.

- *a. FLAD, A., 1949.—“Über die Magenwurmseuche der Enten.” 3 (61), 4–5.

687—Klinicheskaya Meditsina. Moscow.

- a. BARATS, S. S., 1949.—[A case of pulmonary paragonimiasis.] 27 (4), 88–90. [In Russian.]
 b. NEKLYUDOV, S. F., 1949.—[Rectal suppositories in the treatment of oxyuriasis.] 27 (5), 83–84. [In Russian.]
 c. KAFAROV, I. I., 1949.—[Volvulus of small intestine due to ascariasis.] 27 (12), 85–86. [In Russian.]

688—Klinische Wochenschrift.

- a. GRAEVE, K. & HERRNRING, G., 1949.—“Über die Anwendung der Gamma-Isomere des Hexachlorcyclohexan als Anthelminthicum.” 27 (17/18), 318.
 b. BREDE, H. D., 1949.—“Vermexan, ein Gamma-Hexachlorcyclohexanpräparat als Anthelminthicum.” 27 (43/44), 755.

(688a) Graeve & Herrnring report that doses of from 0.05 gm. to 0.15 gm. per kg. body-weight of γ -benzene hexachloride were well tolerated by mice. *In vitro* tests showed that *Parascaris equorum* in 500 c.c. Ringer's solution were killed by 0.0005 gm. of the substance in $3\frac{1}{2}$ hours, and by amounts varying between 0.001 gm. to 0.0025 gm. in two hours. The authors themselves took doses of 30 mg. three times a day for seven days without harmful effects. A.E.F.

(688b) Brede has treated a series of 148 cases of enterobiasis (88 adults and 60 children) with “Vermexan”, each tablet of which contains 25 mg. of Gammexane (γ -benzene hexachloride). A total of 24 tablets (12 for children under 10) was given over a period of 21 days. 145 cases were cured after a single course of treatment, and of the remaining three cases, two were cured after a second course. The drug was well tolerated. A.E.F.

689—Kungl. Fysiografiska Sällskapets i Lund Föreläsningar.

- a. ALLGÉN, C. A., 1949.—“Über einige südschwedische Brackwasser- und Erdnematoden.” 19, 3–19.

(689a) Allgén reports on the brackish water and soil nematodes obtained from samples of mud collected about 20 km. north of Hälsingborg on the west coast of Sweden in July 1947. The following are new to science: *Theristus scanicus* n.sp. from brackish water, and *Plectus elymi* n.sp. and *Rhabditis scanica* n.sp. from soil. T.G.

690—Lambillionea.

- a. THÉODORIDÈS, J., 1949.—“Note complémentaire sur l'importance de *Tenebrio molitor* L. en parasitologie humaine et vétérinaire.” 49 (11/12), 125–127.

(690a) To Leclercq's list of helminths for which *Tenebrio molitor* is recorded as a vector, Théodoridès adds *Hymenolepis arvicolae*, *H. mutata*, *H. nana* var. *fraterna*,

H. microstoma (*Onchoscolex decipiens* Dies.) and *Protopirura muris* (*Cephalacanthus monacanthus* Dies.).

R.T.L.

691—Laval Médical.

- a. MARCOUX, H., 1949.—“Le traitement des parasitoses intestinales.” 14 (8), 1018-1034; (9), 1174-1191.

(691a) Marcoux describes in detail the methods of administration and the relative therapeutic values of extract of male fern and oleoresin of aspidium, pumpkin seeds, pomegranate root decoction and pelletierine, carbon tetrachloride, carbon tetrachloride with oil of chenopodium, thymol, ether extract of *Dryopteris spinulosa* and pyrethrum for *Taenia saginata*, *T. solium* and *Diphyllobothrium latum*; santonin and “semen-contrà” [both prepared from *Artemisia maritima*], thymol, and hexylresorcinol for *Ascaris lumbricoides*; santonin and “semen-contrà”, thymol, hexylresorcinol, diphenan, aluminium acetobenzoate, methylene blue, phenothiazine, gentian violet, and sodium dihydrocholate for *Enterobius vermicularis*. Prophylactic measures are described for each infection. P.M.B.

692—Levende Natuur.

- a. OORT, A. J. P., 1949.—“Schimmels, die aaltjes vangen.” 52 (12), 221-226.

(692a) Oort gives a popular account of the nematode-destroying fungi (*Stylopaga hadra*, *Dactylella* spp., *Dactylaria* spp. and *Arthrobotrys oligospora*) and hints at their potential use for the control of *Heterodera rostochiensis* and *H. marioni*.

A.E.F.

693—Lille Chirurgial.

- a. INGELRANS, P., VANLERENBERGHE, J., BIGUET, J. & LACHERETZ, M., 1949.—“A propos de deux cas d'ascaridiose compliqués d'accidents aigus. Type invagination et appendicite.” 4, 173-174.

694—Maanedsskrift for Dyrlæger.

- a. KOCH, S. O., 1949.—“Ormeknuder i tarmene hos kvaeg (*Strongylosus nodularis intestini*).” 60 (14), 321-342. [English summary pp. 341-342.]

(694a) The verminous nodules found in the gut wall of 26.2% of 1,166 cattle examined at Aarhus, Denmark, varied from a pinhead to a pea in size. The histology of the nodules is described. Some contained inspissated pus, others were completely calcified. Occasionally the nodules ulcerated into the intestinal lumen. Part or the whole of the gut involved was condemned. The causal agent was identified as *Anchylostomum bovis* [= *Oesophagostomum radiatum*].

R.T.L.

695—Maroc Médical.

- *a. GUILLEMAN, BOLOT, DUCROS & COLONNA, 1949.—“Echinococcose péritonéale généralisée chez un opéré ancien pour kystes hydatiques du foie.” 28 (291), 443-444.
b. PREVOST, J., 1949.—“Kyste hydatique du foie fistulisé dans les voies biliaires.” 28 (293), 664-665.

696—Marseille Médical.

- *a. VAGUE, J., 1949.—“Le traitement des parasitoses intestinales en France métropolitaine.” 86 386-392.

697—Meddelanden. Lantbrukshögskolans Baljväxtlaboratorium, Uppsala.

- a. ÅKERBERG, E. & BINGEFORS, S., 1949.—“Om förekomsten av klöverröta och klöver-nematod samt motståndskraften hos våra vallbaljväxter.” No. 12, pp. 16-20.

(697a) A brief account of the damage caused by clover rot (*Sclerotinia trifoliorum*) and clover stem eelworm (*Ditylenchus dipsaci*) in Swedish leys is given. Stem eelworm

is known from nearly the whole of Sweden. Two southern Swedish red clover strains, Svälöf's Merkur and Weibull's Resistentia, are very resistant to both clover rot and stem eelworm, but are not winter-hardy enough for the central and northern parts of Sweden. Local strains in this part of the country are very winter-hardy but not resistant to the eelworm. Breeding work is being done in order to combine the winter-hardiness with the resistance. S.B.

698—Médecine Tropicale. Marseilles.

- a. CAWSTON, F. G., 1949.—"Schistosomiasis in southern Africa." 9 (3), 408-409.
- b. CAPPONI, M., 1949.—"La filariose en Indochine." 9 (3), 442-446.
- c. LALOUEL, J., 1949.—"M'buaki et 'diboba' au Congo français." 9 (4), 605-608.
- d. NAVARRANNE, P., 1949.—"Considérations sur les accidents post-opératoires dus à l'ascaridiose." 9 (5), 823-828.
- e. HUARD, P., 1949.—"Les lésions génitales des filariens à Hanoi." 9 (6), 883-895.

(698a) Cawston gives a short general account of schistosomiasis in southern Africa. He lists the normal and occasional intermediate hosts and stresses the difficulties in their identification and the importance placed on this as a means of distinguishing schistosomiasis haematobia and mansoni. The indiscriminate killing of snails and other aquatic life he regards as unnecessary and potentially dangerous in that it disturbs the balance of nature. He mentions methods of treatment and their limitations. S.W.

(698b) Capponi summarizes the work which has been done on filariasis in Indo-China and concludes that there is need for further study. In his own survey he found *Wuchereria malayi* in south Annam and Cochin-China; the incidence of microfilariae was about 5% in the Red River delta but was less in southern Indo-China, only two out of 20,000 thick blood films examined showing microfilariae. A further series of 5,000 blood films showed no microfilariae but in the province of Thu-Dau-Mot microfilariae were found in seven out of 363 blood films examined. S.W.

(698c) Lalouel discusses the relationship of ancylostomiasis to the depigmentation oedema syndrome variously termed "m'buaki" and "diboba", and gives clinical notes of six cases. R.T.L.

(698d) Verminous colitis, generalized peritonitis and fistula are rare and grave post-operative effects of *Ascaris lumbricoides* infection. R.T.L.

699—Medicina Clínica. Barcelona.

- a. GARCÍA TORNEL, L. & DARGALLO REVENTÓS, J., 1949.—"Hidatidosis muscular." 13 (6), 394-399.

700—Medicina Contemporanea.

- *a. PEREIRA DA SILVA, J., 1949.—"Três casos de cisticercose humana." 67 (11/12), 533-545.

701—Medicine and Laboratory Progress. Cairo.

- a. EL-SADR, A. R., 1949.—"Surgical aspects of bilharziasis of the ureter." 10 (11), 231-245.

702—Medizinische Klinik.

- a. ZÖLLNER, G., 1949.—"Die Verordnung von Oleum Chenopodii und Ascaridol." 44 (49), 1566-1569.

(702a) Zöllner reviews the literature on the treatment of ascariasis with chenopodium oil or its effective component, ascaridol. He describes the drug and gives details of dosage, preparation for treatment, contra-indications and possible side effects. There are 72 references to the literature. A.E.F.

703—Medizinische Monatsschrift. Stuttgart.

- *a. SCHEID, G. & MENDHEIM, H., 1949.—“Die medikamentöse Therapie der Ascaridiasis unter besonderer Berücksichtigung der gegenwärtigen Verhältnisse.” 3, 420-421.

704—Memorias do Instituto Oswaldo Cruz.

- a. PARÁ, M., 1949.—“Dados estatísticos de viscerotomia sobre doenças e condições mórbidas do homem no Brasil. I. Schistosomose mansônica no período de 1937-1946.” 47 (3/4), 443-519. [Also in English pp. 521-534.]
 b. LOBATO PARAENSE, W., 1949.—“Observações adicionais sobre o sexo do *Schistosoma mansoni* nas infestações por cercarias de um único molusco.” 47 (3/4), 535-546. [Also in English pp. 547-556.]

(704a) During the period 1937 to 1946, post-mortem examination of 267,107 livers revealed 5,953 instances of *Schistosoma mansoni* infection in Brazil. The infected cases came from all the states and territories except that of Amapá. The highest incidence occurred in the states of the north-east. The disease was common in Espírito Santo and Minas Geraes. It was most frequent in persons between 10 and 19 years of age. R.T.L.

(704b) Dissections of 400 specimens of *Australorbis olivaceus* taken from a brook within the grounds of the Instituto Oswaldo Cruz showed that 8-25% contained sporocysts and cercariae of *Schistosoma mansoni* and 2-5% ocellate furcocercous cercariae corresponding to *Dicranocercaria ocellifera*. Fourteen guinea-pigs were inoculated with schistosome cercariae from 24 *A. olivaceus*, each guinea-pig being infected from a single snail. All the resulting infections were unisexual. The testes numbered from four to nine. Rudimentary ovaries developed secondarily in 25% and 29% respectively of the male worms collected from two of the guinea-pigs. R.T.L.

705—Minerva Chirurgica. Turin.

- a. ROMANO, M., 1949.—“Considerazioni su di un caso di occlusione da ascaridi.” 4 (17), 491-494.

706—Miscellaneous Publications. Museum of Zoology, University of Michigan.

- a. KENK, R., 1949.—“The animal life of temporary and permanent ponds in southern Michigan.” No. 71, 66 pp.

(706a) Leeches of temporary ponds survive the dry summer and autumn by rolling up, secreting a slime layer and lying in the bottom material which still contains considerable moisture. They also remain inactive buried in the earth throughout the entire cold season. At Ann Arbor, Michigan, a temporary pond contained *Helobdella stagnalis*, *H. fusca*, *Placobdella rugosa*, *P. picta*, *Erpobdella punctata*, *Dina microstoma* and *D. buccera* n.sp. Two permanent ponds contained *Glossiphonia heteroclita*, *Helobdella stagnalis*, *H. fusca*, *Placobdella parasitica*, *P. picta*, *Erpobdella punctata* and *Dina buccera*. The majority are widely distributed species and none showed a marked preference for temporary pools. *Dina buccera*, identified by Moore, is briefly characterized (in a foot-note): it resembles *D. parva* in size and form and is most closely related to *D. fervida*. R.T.L.

707—Monitore Zoologico Italiano.

- a. BRUNETTI, B., 1949.—“Contributo alla conoscenza dei nematodi del M. Tirreno. II.—Alcune specie appartenenti alle famiglie: Enoplidae, Cyatholaimidae, Chromadoridae, Axonolaimidae.” 57 (1/6), 41-59.

(707a) From samples of detritus collected at Viareggio in the spring of 1940 Brunetti obtained a number of marine nematodes which she describes in this paper. The following are new: *Enoploides tyrrhenicus* n.sp., *Enoplolaimus glabrus* n.sp., *Enoplolaimus attenuatus* n.sp., *Paracyatholaimus tyrrhenicus* n.sp., *Hypodontolaimus mediterraneus* n.sp. and *Ascolaimus mediterraneus* n.sp. T.G.

708—Monographs on Tea Production in Ceylon.

- a. GADD, C. H., 1949.—“The commoner diseases of tea.” No. 2, 94 pp.

(708a) In this monograph on tea diseases a chapter is devoted to *Heterodera marioni* and *Pratylenchus pratensis*. The former is well known to tea planters as a pest of dadaps and *Tephrosia*. It causes great damage to tea seedlings but is harmless to older plants and mature bushes. The larvae enter the young roots of mature bushes but no galls are formed and there are no outward signs of infection, but in a few areas at high elevations the roots of mature bushes become irregularly thickened and the infected bushes have a thin appearance and recovery after pruning is markedly delayed. It is thought that there are two distinct races. *P. pratensis* produces small black spots on the white surface of the tea roots and occurs in patna grasses. It is suggested that in the absence of satisfactory methods of control, the most vigorous bushes in infected fields should be propagated vegetatively to supply infected areas.

R.T.L.

709—Monthly Agricultural Review. Calro.

- *a. DOSS, W., 1949.—[The nemathelminthes that attack crops in Egypt.] 7 (6), 39-44. [In Arabic.]

710—Monthly Bulletin. Indian Coffee Board.

- a. PATTABHIRAMAN, T. V., 1949.—“The coffee eelworm—*Anguillulina pratensis* (de Man, 1881).” 13 (8), 112-115.

(710a) Pattabhiraman reports the symptoms shown by arabica coffee when the roots are attacked by *Anguillulina pratensis* (de Man, 1881) [*Pratylenchus pratensis* (de Man, 1880) Filipjev, 1936] and records a high mortality in young plants up to five years old in Coorg. The disease occurs in gradually spreading patches. He refers to *Anguillulina similis* [Radopholus similis (Cobb, 1893) Thorne, 1949] also attacking coffee roots. He gives a list of chemicals which have failed to control *P. pratensis* and recommends use of clean soil and sites, transplanting pot plants, and clean husbandry. He warns against the inherent dangers of trap-cropping. *Coffea robusta* is partially immune to attack and grafting of *C. arabica* on this stock can be carried out.

J.B.G.

711—Nachrichtenblatt der Biologischen Zentralanstalt Braunschweig.

- a. HÄRLE, A., 1949.—“Die wichtigsten Krankheiten und Schädigungen an Kulturpflanzen im Jahre 1948.” 1 (5), 63-68.
b. GOFFART, H., 1949.—“Englands Kampf gegen die Nematoden.” 1 (6), 87-88.

(711a) In a survey of the diseases and pests of crops observed during 1948 in the U.S. and British Zones of Germany, Härle mentions attacks of stem eelworm (*Ditylenchus dipsaci*) on rye and clover, oat root eelworm on oats in Schleswig-Holstein and potato root eelworm in many gardens in the vicinity of towns.

T.G.

(711b) Goffart briefly reviews the status of the more important plant-parasitic eelworms in England at the present time. Those to which he refers are the potato root eelworm (*Heterodera rostochiensis*), the sugar beet eelworm (*H. schachtii*), the pea root eelworm (*H. göttingiana*), the stem and bulb eelworm (*Ditylenchus dipsaci*) and the root-knot eelworm (*H. marioni*). He refers to some of the recommendations which have been made for their control and to some of the published work on chemical control.

M.T.F.

712—Nachrichtenblatt für den Deutschen Pflanzenschutzdienst.

- a. STAAR, G., 1949.—“Das Nematodenproblem des thüringischen Kartoffelbaues.” New series, 3 (1/2), 19-23.

(712a) This is a general account of the development and spread of the potato root eelworm (*Heterodera rostochiensis*) in Thuringia and a warning of its dangers. Recommendations for its control by crop rotations are given and the official regulations governing the cultivation of potatoes on infested land are detailed.

M.T.F.

713—Naturwissenschaftliche Grundbegriffe für die Landbauliche Praxis. Zoologische Reihe. [Supplement to Pflanzenschutz.]

- a. BOLLOW, H., 1949.—"Fadenwürmer (Nematoda)." No. 6, 6 pp.

(713a) This is a brief account of the nematodes infesting plants of economic importance in Germany.

R.T.L.

714—Népegészségügy. Budapest.

- a. SZABÓ, I., 1949.—"Adatok a bélférgek gyakoriságára a Dunántúlon." 30 (6), 166-168. [English & Russian summaries p. 184.]
 b. FÜSTHY, Ö., 1949.—"Újabb szempontok a bélférgesség leküzdésében." [Nouveaux points de vue concernant la lutte anthelminthique.] 30 (13), 524-525.

(714a) Of 1,000 faecal examinations made in western Hungary, including the town of Pécs, 3.5% were found positive for *Ascaris lumbricoides*, 7.9% for *Trichuris trichiura*, 2.3% for *Enterobius vermicularis*, 0.4% for *Diphyllobothrium latum*, 1.4% for *Taenia* sp. and 0.1% for *Ancylostoma duodenale*. The highest incidence was in mining districts and in riverside settlements.

P.M.B.

715—Nevropatologiya i Psikhiatriya. Moscow.

- a. VIZEN, E. M., 1949.—[A case of cerebral cysticerciasis.] 18 (2), 50-51. [In Russian.]

716—New York Medicine.

- a. KEAN, B. H., 1949.—"The diagnosis of the commoner parasitic diseases." 5 (11), 16-19.

717—Notas del Museo de La Plata.

- a. RINGUELET, R., 1949.—"Notas sobre hirudíneos neotropicales. VI. Presencia del género *Glossiphonia* en la Argentina y otras adiciones al conocimiento de la hirudofauna de los países del Plata." 14 (Zoología No. 122), 141-159.

(717a) Our knowledge of the Hirudinea of Argentina and Uruguay has been extended by a study of material recently added to the annelid collection at the Museo de La Plata. *Glossiphonia mesembrina* n.sp. from an island in Lake Nahuel Huapi is distinguished from *G. australiensis* by differences in the digestive and reproductive systems, and from this species and *G. novae-caledoniae* by having the eyes in different annuli. This is the first record of *Glossiphonia* as a neotropical genus. Ten species of *Helobdella*, *Oxyptychus inexpectatus*, *Semiscollex similis* and *Orchibdella pampeana* are also recorded from Argentina and Uruguay.

P.M.B.

718—Nurseryman and Seedsman. London.

- a. ALLERTON, F. W., 1949.—"Control of chrysanthemum eelworm." 108, 194-195.

(718a) For the treatment of chrysanthemums attacked by eelworm, the use of Sterizal or sodium selenate is recommended.

R.T.L.

719—Öffentliche Gesundheitsdienst (Der). Stuttgart.

- a. BAUMANN, H., 1949.—"Epidemiologisch-diagnostischer Beitrag zur Ascaridiasis." 11 (2), 52-55.
 b. SCHLIEPER, C. & KALIES, W., 1949.—"Zur Bekämpfung des menschlichen Spulwurmes *Ascaris lumbricoides* L." 11 (9), 298-306.

(719b) Schlieper & Kalies devote the greater part of their paper to the problem of destroying *Ascaris* ova and thereby reducing the very high incidence of human ascariasis in Germany. They emphasize the very great resistance of *Ascaris* ova to chemical and physical agents and point out that eggs in sewage sludge can only be killed with certainty by exposing sludge to temperatures of 70°C. Only sludge treated in this way should be

used for manuring vegetables which are eaten raw. They agree that propaganda among rural populations is necessary but insist that it should be scientifically accurate. A.E.F.

720—Österreichische Zeitschrift für Kinderheilkunde und Kinderfürsorge.

- a. SOLLGRUBER, K., 1949.—"Über Ascariden-Durchseuchung." 3 (4), 398-404.

(720a) Sollgruber draws attention to the greatly increased incidence of human ascariasis in Austria and gives a brief general account of the diagnosis, symptoms and treatment of this infection. He considers chenopodium oil, in conjunction with a purgative, to be the remedy of choice. A.E.F.

721—Ophthalmologica. Basle.

- a. FRIEDMANN, M., 1949.—"Thelaziasis der Conjunctiva." 118 (3), 193-204. [English & French summaries pp. 203-204.]
b. APPELMANS, M., 1949.—"Larves d'*Onchocerca volvulus* dans le cristallin." 118 (4/5), 733-742. [English & German summaries p. 741.]

(721a) Hitherto seven instances of *Thelazia callipaeda* and two of *T. californiensis* have been reported from the human eye. A case of *T. callipaeda* is now reported from a young woman in southern India where the infection is common in dogs but has not previously been found in man. R.T.L.

(721b) Appelmans has investigated the condition found in ocular onchocerciasis which he names "cataracte vermineuse". He was unable to prove that the microfilariae penetrated the lens capsule. S.W.

722—Paris Médical (Partie Médicale).

- a. ALISON, F., 1949.—"Notions pratiques sur les parasitoses intestinales chez l'enfant." 39 (44), 531-536.

723—Pathologica.

- *a. FALCIDIENO, P. & TAGLIAFERRO, A., 1949.—"Cisti da echinococco pelviche." 41, 222-223.

724—Pediatria de las Américas. Mexico.

- a. RODRIGUEZ LEÓN, O., 1949.—"Las diarreas agudas en la infancia. III. Tratamiento parasitológico." 7 (6), 275-280.

725—Pediatriya. Moscow.

- a. RYAZANOVA, M. F. & UMNOVA, N. F., 1949.—[Hexylresorcinol in the treatment of ascariasis in children.] Year 1949, No. 4, pp. 56-57. [In Russian.]

726—Peking Natural History Bulletin.

- a. HOEPLI, R., 1949.—"From a travel note-book." 17 (3), 197-203.
b. LU HSIU-FANG, 1949.—"A modification of Faust's zinc sulphate centrifugal flotation technic for use in simply equipped diagnostic laboratories in China." 18 (1), 1-6.
c. FENG, L. C., 1949.—"Areca nut and its extracts in the treatment of human tapeworm infections." 18 (1), 63-72.
d. HOEPLI, R., FENG, L. C. & LI, F., 1949.—"Histological reactions in the liver of mice due to larvae of different *Ascaris* species." 18 (2), 119-131.

(726a) Hoeppli refers to the occurrence of *Schistosoma japonicum*, *Necator americanus*, *Ascaris lumbricoides*, *Wuchereria bancrofti*, *Clonorchis sinensis* and *Fasciolopsis buski* in the Philippines. When the last two species occur they have apparently been acquired on the Asiatic mainland. P.M.B.

(726b) Lu Hsiu-Fang describes a modification of Faust's technique for detecting helminth ova and protozoan cysts in faeces, which can be applied when only a low-speed

electric centrifuge (1,200–1,500 r.p.m.) or a hand centrifuge (not less than 1,200 r.p.m.) is available. In a small number of tests the best results were obtained by using a 1:4 suspension and a zinc sulphate solution (specific gravity 1.2) and centrifuging for not less than five minutes. This modification appeared to be particularly useful in detecting *Taenia* and unfertilized *Ascaris* ova.

P.M.B.

(726c) Feng used decoction and crude extracts of areca nut and a mixture of areca nut and bismuth iodide with complete success in 22 cases with *Taenia solium*, but with less success (about 30%) in 16 cases with *T. saginata* and 6 with *Hymenolepis nana*. Up to 70 gm. of the decoction, 5 gm. of the crude extract and 1 gm. of the areca nut and bismuth iodide mixture administered orally to adults, produced no toxic effects except in isolated cases. Other advantages of this mixture are simplicity in use, requiring no purgative either before or after administration and no starving beforehand, and the frequent expulsion of the worm complete with the scolex. The areca nut and bismuth iodide mixture is the preparation of choice. It is insoluble in water, tasteless and causes little or no irritation of the stomach, thus reducing nausea and vomiting to a minimum. It can be taken easily by children.

P.M.B.

(726d) Histological changes in the liver of mice infected with embryonated eggs of *Ascaris lumbricoides*, *Parascaris equorum* and *Toxocara canis* were compared over a period of 6–10 weeks. There was no significant difference in the reactions in the first week. Encapsulated larvae of *T. canis* appeared two weeks after infection, with increasing thickness of the capsule. The greater size and more active movements of the larvae of *T. canis* probably accounted for this encapsulation and for the fact that they remained arrested in the liver whereas those of the other two species normally migrated. The larvae remained alive inside the capsules for many weeks and could cause infection if eaten by a dog, whereas those of *A. lumbricoides* and *P. equorum* did not survive long if they remained in the liver.

P.M.B.

727—Pennsylvania Medical Journal.

- a. GLOVER, L. P., 1949.—“Onchocerciasis in America.” 52 (12), 1371–1374.

728—Pharmazie. Berlin.

- a. HEEGER, E. F., 1949.—“Die Düngung der Heil- und Gewürzpflanzen und der Gemüse mit menschlichen Fäkalien, eine Quelle der Wurminfektion.” 4 (4), 192–193.

729—Philippine Journal of Surgery.

- a. ESQUIVEL, F. & ALFONSO, R. L., 1949.—“Gallbladder disease among Filipinos with a report on ascariasis of the biliary tract.” 4 (1), 22–42. [Discussion pp. 42–43.]

730—Policlinico (Sezione Pratica). Rome.

- a. SORICE, F., 1949.—“L'ascaridiosi polmonare.” 56 (13), 410.
 b. ALIERI, F., 1949.—“Un caso di cisti di echinococco della tiroide.” 56 (27), 801–803.
 c. ROSSARO, R., 1949.—“Contributo alla ascaridiasi chirurgica.” 56 (29), 874–880.
 d. LEONE, C., 1949.—“Riabilitazione delle sanguisughe.” 56 (44), 1335–1336.
 e. ZANNINI, G., 1949.—“Echinococcosi della milza quale indicazione alla splenectomia.” 56 (45), 1352–1357.
 f. LANDOLO, C., 1949.—“Diagnosi radiografica dell'ascaridiasi intestinale.” 56 (45), 1368.
 g. BOSCARDI, F., 1949.—“Divagazioni nel campo delle parassitosi.” 56 (49), 1502–1509.

731—Postgraduate Medicine. Minneapolis.

- a. GOULD, S. E., 1949.—“Diagnosis and treatment of trichinosis.” 5 (4), 257–269.

732—Poultry Science.

- a. TODD, A. C. & HANSEN, M. F., 1949.—“DDT and infective tapeworm larvae.” 28 (4), 626-627.

(732a) The cysticercoids of *Raillietina cesticillus* in *Tribolium confusum* were still viable and infective to New Hampshire chicks after continuous exposure of the infected intermediary flour beetles to D.D.T. All the beetles had been inactivated within one and a half hours of surface spraying.

R.T.L.

733—Poumon.

- a. CURTILLET, E., 1949.—“L'état actuel de la question des kystes hydatiques du poumon.” 5 (1), 9-41. [Discussion pp. 33-36.]
 b. DUBAU, R., 1949.—“Kyste hydatique du foie overt dans la plèvre en 1944, guérison après pleuro-hépatostomie suivie de drainage.” 5 (1), 43-44.
 c. DUBAU, R., 1949.—“Echinococcose pulmonaire, intervention en plèvre libre, énucléation du kyste sans ouverture préalable.” 5 (1), 45-46.
 d. MONOD, O. & WARNERY, 1949.—“Extirpation en un temps d'un kyste hydatique du poumon et de sa loge fibreuse.” 5 (1), 47-49.

734—Presse Médicale.

- a. MÉHAUT, M., 1949.—“Traitement des parasitoses intestinales.” 57 (54), Suppl. pp. 772G-772H.
 b. MORHARDT, P. E., 1949.—“Le renouveau des sangsues.” 57 (62), 882.

735—Proceedings of the American Society for Horticultural Science.

- a. FRAZIER, W. A. & DENNETT, R. K., 1949.—“Isolation of *Lycopersicon esculentum* type tomato lines essentially homozygous resistant to root knot.” 54, 225-236.

(735a) Frazier & Dennett report on the breeding of lines of tomatoes resistant to root-knot. High dominance of resistance was shown by F_1 hybrids between 2N lines derived from T-1427 and 4N *Lycopersicon esculentum*. Further, hybridization of a selection 3386, showing homozygous resistance to root-knot in Hawaii, with *L. esculentum* led to four lines, 3962, 3963, 3999 and 4000, showing a high level of resistance. The 3386 type resistance seems to be resistant to root-knot formation, but not resistant to entrance of *Heterodera marioni* larvae. Some slight galling occurred in a few plants. There was a high correlation between resistance of seedlings and of the mature plants. Resistance is shown by stem as well as by roots. The high dominance of resistance shown by the F_1 hybrids may make their early use possible for commerce.

J.B.G.

736—Proceedings of the California Fig Institute.

- *a. McBETH, C. W., 1949.—“Nematodes affecting figs.” Annual Research Conference (3rd), pp. 16-17.

737—Proceedings of the Egyptian Academy of Sciences.

- a. HILMY, I. S., 1949.—“New paramphistomes from the Red Sea dugong, *Halicore halicore*, with description of *Solenorchis* gen.n. and *Solenorchinae* subf.n.” Year 1948, 4, 1-14.
 b. HILMY, I. S., 1949.—“*Khalilloossia ali-ibrahimi* gen. et sp.n. (Trematoda—Paramphistomatoidea) from the black-winged stilt, *Himantopus h. himantopus*, with a note on the occurrence of paramphistomes in birds.” Year 1948, 4, 15-19.
 c. HILMY, I. S., 1949.—“*Patagifer skrjabini* sp.n. (Trematoda—Echinostomatidae), from the glossy ibis, *Plegadis falcinellus falcinellus* (Lin.), with a note on the genus.” Year 1948, 4, 20-23.

(737a) From a study of material obtained from the caecum of a Red Sea dugong, *Halicore halicore* (= *Dugong dugong*), caught off Ghardaqa on the Egyptian coast, Hilmy erects a new genus, *Solenorchis*, and a new subfamily *Solenorchinae* (= *Solenorchinae*), of the *Paramphistomatidae*. Four species, *Solenorchis travassosi* n.sp. (type species), *S. gohari* n.sp., *S. naguibmehfouzi* n.sp. and *S. baeri* n.sp. are described. Characteristics of the subfamily are the equatorial excretory bladder between the two testes which are

tandem in position, the intestinal caeca which converge and curve outwards at their distal ends and the absence of Laurer's canal. The more important generic characters are a non-sacculate pharynx, sub-terminal acetabulum with an anterior semi-lunar muscular cushion and a post-acetabular transverse lip, and the absence of cirrus and cirrus-sac. *S. gohari* differs from *S. travassosi* in that its slightly oblique testes are quite separate from one another and deeply lobed. *S. naguibmehfouzi* differs from both these for the testes are oval, the post-acetabular lip is rounded and smaller, the ovary has a regular outline and the muscular cushion on the antero-dorsal aspect of the acetabulum is narrower. *S. baeri* is smaller than the other three species; the testes are smooth and separate and the yolk glands have fine follicles extending behind the caeca. Nematodes from the same host are identified as *Paradujardinia halicoris*.

H.C.

(737b) *Khalilloossia ali-ibrahimi* n.g., n.sp. from the black-winged stilt *Himantopus h. himantopus* is closely related to *Cephaloporus* from which it differs as follows: the cuticle is smooth; the oesophagus is short and sinuous; the intestinal caeca are long; the testes are ventro-caecal; the ovary is smooth and placed in front of the bifurcation of the gut; the yolk glands are post-testicular; the uterus has several lateral ascending and descending sinuous loops. A host list of the three species of Paramphistomatoidea known to occur in birds is appended.

R.T.L.

(737c) *Patagifer skrjabini* n.sp. from the glossy ibis *Plegadis f. falcinellus* is distinguished from other species by the number (five) and size of the corner spines, the marked difference in size of the two testes, and the limited extension of the uterus which is situated mainly ventral to the ovary and shell gland and contains only about 40 eggs. The new species brings the number of *Patagifer* up to seven.

R.T.L.

738—Proceedings of the Florida State Horticultural Society.

- a. CHRISTIE, J. R., 1949.—"Practical aspects of nematode control with chemicals." 62, 117-118.

(738a) In this brief theoretical discussion on soil fumigants, Christie suggests that a fumigant possessing marked fungicidal as well as nematicidal properties might prove to be inconveniently phytocidal to the host plant. Solid soil fumigants might be feasible if their incorporation into the soil were thorough, and might retain nematicidal properties longer than volatile liquids do.

B.G.P.

739—Proceedings of the Hawaiian Entomological Society.

- a. SCHWABE, C. W., 1949.—"Observations on the life history of *Pycnoscelus surinamensis* (Linn.), the intermediate host of the chicken eyeworm in Hawaii." Year 1948, 13 (3), 433-436.

(739a) As the burrowing cockroach *Pycnoscelus surinamensis* is the only known vector in Hawaii of *Oxyspirura mansoni* of poultry, Schwabe gives an account of its mode of reproduction, habits and habitat, with notes on the appearance of its egg case and the new born nymph.

R.T.L.

740—Proceedings of the Indian Science Congress.

- a. BHALERAO, G. D., 1949.—"Blood-fluke problem in India." [Presidential Address to the Section of Medical and Veterinary Sciences.] 35th (1948), Part II, pp. 57-71.
 b. IYER, P. R. K., 1949.—"Immature amphistomiasis in sheep in the Government Cattle Farm, Hosur." [Abstract.] 35th (1948), Part III, p. 87.
 c. GOPALAKRISHNAN, V. R., 1949.—"Stephanofilaria among buffaloes in Assam." [Abstract.] 35th (1948), Part III, p. 88.
 d. RAJA, P. R., 1949.—"On a collection of cestodes from marine food fishes of Trivandrum coast." [Abstract.] 35th (1948), Part III, p. 191.
 e. BAL, D. V. & KHAMBATA, F. S., 1949.—"Some new species of cestodes of the marine fish *Rhynchobatus djeddensis* (Forsk) from Bombay." [Abstract.] 36th (1949), Part III, p. 156.

- f. GHARPURE, P. V., 1949.—"Studies on the oxygen requirements of nematodes." [Abstract.] 36th (1949), Part III, pp. 184-185.
 g. RAO, S. R., 1949.—"Acute dysenteric conditions due to schistosome infection in cattle." [Abstract.] 36th (1949), Part III, p. 185.

(740a) As schistosomes rank foremost in undermining the health of almost all domesticated animals in India, Bhalerao summarizes the work that has been done there on these parasites and briefly records the occurrence of swimmer's itch in three men who were wading knee deep through the water collecting snails in two tanks in the Mysore State. Their legs and arms became covered with papules. After about six hours the condition became distressing but some relief followed the application of a concentrated solution of magnesium sulphate. There were two kinds of furcocercous cercariae in the molluscs collected from the tanks. R.T.L.

(740b) Many deaths occurring between December and March in a flock of sheep at Hosur Cattle Farm near Madras, are stated to have been due to immature paramphistomes. These were embedded in the inflamed mucosa and numbered from 200 to 500 per sq. in. The main symptoms were intermaxillary oedema, discharge from the nostrils and acute diarrhoea. Post mortem there was acute congestion of the abomasum and intestine. R.T.L.

(740c) [A fuller account of this paper appeared in *Indian J. vet. Sci.*, 1949, 18 (4), 227-231. For abstract see *Helm. Abs.*, 18, No. 207a.]

(740e) Of 25 species of cestodes obtained from *Rhynchobatus djeddensis* 12 are new [but they are not named or described in this brief notice]. R.T.L.

(740f) [No details are given in this brief notice.]

(740g) [The full account of this paper appears in *Bombay Vet. Coll. Mag.*, 1951, 2, 52-57. For abstract see *Helm. Abs.*, 20, No. 373a.]

741—Proceedings of the Kansas Veterinary Medical Association.

- *a. SWARTZ, B. J., 1949.—"Parasitisms as factors in livestock production with indicated control measures." Year 1948-49, 44/45, 131-138.

742—Proceedings of the National Shade Tree Conference.

- a. STEINER, G., 1949.—"Nematodes that attack boxwoods and their control." 25th (1949), pp. 108-118.

(742a) At the National Shade Tree conference, Steiner is reported as attributing boxwood decline mainly to attack by *Pratylenchus* spp. The disease is known in at least 18 States in the U.S.A. In addition, 20 eelworm species of 14 genera may be implicated. Attacked root systems have a "witches' broom" appearance. Nursery stock should be propagated in sterilized or fumigated soil, and the permanent site should be fumigated before planting. B.G.P.

743—Proceedings of the Tennessee State Horticultural Society.

- *a. NATION, H. A., 1949.—"Nematode control with soil fumigation." 43, 91-95.

744—Proceedings. United States Livestock Sanitary Association.

- a. OLSEN, O. W., 1949.—"Liver flukes in cattle: diagnosis for treatment, and prevention." 52nd Annual Meeting (1948), pp. 79-93.
 b. U.S. LIVESTOCK SANITARY ASSOCIATION, 1949.—"Report of Committee on Parasitic Diseases." 52nd Annual Meeting (1948), pp. 108-111.

(744a) Olsen summarizes earlier work on fascioliasis in the U.S.A. and gives a bibliography of 30 titles. He carried out an experiment over a period of three years on the control of fascioliasis in two herds of cattle (300 and 350 animals respectively) one on

prairie and the other on river-bottom pasture. He found that treatment with hexachlorethane-bentonite suspension twice yearly, in late spring and late autumn, prevented clinical fascioliasis and reduced the incidence of infection and the faecal egg-counts. It did not prevent reinfection which was greater on the prairie than on the river-bottom pasture; this is attributed to the large numbers of jack rabbits and cottontails present as during one year post-mortem examinations showed 32% and 20% respectively to be infected. The fasciolicidal efficacy of hexachlorethane was greatest when the flukes were mature and the liver undamaged. For control he recommends the use of copper sulphate against the intermediaries, combined with drainage and the exclusion of animals from infected land: faeces intended for use as manure should be sterilized. Ducks were not an effective means of controlling the snails.

S.W.

(744b) In flocks that have been treated by the free-choice method of giving phenothiazine in loose salt or mineral mixtures, interruption or discontinuation of the regimen may result in severe parasitism attributable to the persistence of low grade but potentially dangerous residual infection. There is some evidence that this phenothiazine procedure may control *Nematodirus* and tapeworms to some extent although it has no significant effect as an anthelmintic. Recent trials with sodium fluoride for the removal of roundworms from pigs suggest that the optimum dose may be about 0.75%. Treatment may be given shortly after weaning and repeated after an interval of about two months. The results reported in the literature of lead arsenate treatment for *Moniezia* spp. of over 4,000 sheep and goats, mostly as young animals, show that this chemical is safe, effective and beneficial.

R.T.L.

745—Profilassi.

- a. COSTA, A., 1949.—“Pancreatite da *Bilharzia crassa* nei bovini.” 22 (3), 64-67. [English & French summaries p. 66.]

(745a) Costa describes and figures the macroscopic and microscopic changes in the pancreas of three cattle with a massive infection of *Schistosoma bovis* at Santa Teresa di Gallura in Sicily. Adults and eggs were present in the pancreas.

P.M.B.

746—Progresso Medico. Naples.

- a. LOCASCIO, R., 1949.—“Trombosi venose cerebrali nell'anchilostomiasi.” 5 (14), 425-432.

747—Przegląd Epidemiologiczny. Warsaw.

- a. SUREWICZ, W., 1949.—“Próba leczenia fuadyną włośnicy doświadczalnej u świńek morskich.” 3 (3/4), 477-493. [English summary pp. 492-493.]

(747a) Fouadin, when given to guinea-pigs which were each infected with 1,800 *Trichinella spiralis* introduced by gastric sound, had no effect on the number of trichinae present in the muscles 28 days after infection. The guinea-pigs were divided into three groups, one of which was treated from the seventh day after infection, and one from the fourteenth day; the third group was not treated.

P.M.B.

748—Publicación. Escuela de Veterinaria. Universidad de Buenos Aires.

- a. GALOFRE, E. J., 1949.—“La fenotiacina administrada en dosis terapéuticas a los equinos.” No. 4, 19 pp. [English summary p. 18.]

(748a) From a study of its effect on nine horses with strongyle infection, Galofré believes that phenothiazine can be used advantageously in the treatment of this disease. The dosage used was 40 gm. for adult horses, and 10 gm. for a foal. No abnormal symptoms or changes in the blood picture were noted. A marked eosinophilia persisted after treatment in the majority of the animals.

R.T.L.

749—Publicaciones. Facultad de Ciencias Naturales y Museo de La Plata. Serie Técnica y Didáctica.

- a. RINGUELET, R., 1949.—"Identificación microscópica de los huevos de nematoideos comunes en las materias fecales de vacunos, ovinos y equinos." No. 1, 25 pp.

(749a) Ringuelet gives details of the various techniques for examining faeces of cattle, sheep and horses for helminth ova. An illustrated description and key for the identification of ova of nematode species (or genera) commonly found in these hosts are provided.

P.M.B.

750—Publicações Médicas. São Paulo.

- a. NOGUEIRA DA SILVA, N., 1949.—"Helmintíases ou helmintoses. Especialmente 'padronização do tratamento'." 20 (174), 11-19.

(750a) Nogueira da Silva classifies the anthelmintic substances in present-day use and briefly summarizes their dosages and modes of administration.

R.T.L.

751—Publications. Institut Pasteur de la Guyane et du Territoire de l'Inini.

- a. FLOCH, H. & ABONNENC, E., 1949.—"Sur la présence de *W. bancrofti*, de *M. ozzardi* et de *A. perstans* en Guyane française." No. 198, 4 pp.

(751a) In French Guiana, *Wuchereria bancrofti* is common among creoles in the coastal region. *Mansonella ozzardi* is rare but an undoubted infection was observed among the Galibi Indians of Iracoubo. So far the authors have not seen *Acanthocheilonema perstans* except in imported cases but they think it is probably endemic.

R.T.L.

752—Publications of the Seto Marine Biological Laboratory, Kyoto University.

- a. TOKIOKA, T., 1949.—"*Metacercaria pelagica* n.sp., a floating furcocercous cercarian." 1 (2), 65-67.

(752a) Tokioka describes and illustrates *Metacercaria pelagica* n.sp. found floating in the surface water of Ago Bay and Tanabe Bay. He compares its mode of life with that of *Cercaria duplicata* and notes that it is very unusual for a metacercaria to be pelagic. s.w.

753—Rapport Annuel. Institut pour la Recherche Scientifique en Afrique Centrale. Brussels.

- a. DUBOIS, A., 1949.—"Le développement de la médecine expérimentale au Congo Belge." 2nd (1949), pp. 82-147.

(753a) This report includes brief summaries of recent publications on filarial and schistosome infections and their vectors in the Belgian Congo, and a list of references. R.T.L.

754—Rassegna di Fisiopatologia Clinica e Terapeutica. Pisa.

- a. VENTURA, S., 1949.—"Prime ricerche sul ricambio del ferro nell'anemia da anchilostoma." 21 (7/8), 569-593. [English, French & German summaries pp. 591-592.]

755—Records of the Indian Museum.

- a. BAUGH, S. C., 1949.—"On *Paryphostomum horai* sp.nov. (Trematoda: Echinostomatidae), with a note on the systematic position of *Paryphostomum novum* Verma, 1936." 47 (1), 99-106.
b. DAS, E. N., 1949.—"On some new species of the genus *Centrorhynchus* Lühe, 1911." 47 (3/4), 291-301.

(755a) *Paryphostomum horai* n.sp. from *Anas poecilorhyncha* is distinguished from other species of the genus, except *P. sufrartylfex*, by the absence of a prepharynx and by the presence of a stout and prominent spine in the end groups of the collar. From *P. sufrartylfex* it differs in the extent, size and position of the cirrus sac. Baugh has re-examined and drawn

the type specimen of *P. novum* Verma, 1936. He is of the opinion that it should be transferred to *Echinostomum* as the cirrus sac lies in front of the acetabulum and the testes are only slightly lobed. R.T.L.

(755b) *Centrorhynchus falconis* n.sp. from *Circus macrourus* has 28 to 30 longitudinal rows of hooks, 12 to 14 hooks in a row on the proboscis and 9 smaller hooks in a row on the neck. The size of the body and also of the hooks is smaller than in *Centrorhynchus spinosus* which has, moreover, a much larger number of hooks on the neck. *C. macrorchis* n.sp. from *Cerchneis tinnunculus tinnunculus* differs from all other species of the genus in the number of rows of hooks (24 to 28) and their distribution on the proboscis and neck. Each row has 19 hooks, 10 on the proboscis and 9 on the neck. *Centrorhynchus brevicaudatus* n.sp. from *Ophicephalus* sp. has 24 to 26 longitudinal rows of hooks. Each row has 13 to 14 hooks on the head and 10 on the neck. *C. brevicanthus* n.sp. from *Temenuchus pagodarum* has 30 to 32 longitudinal rows of hooks with 11 to 12 hooks in each row. The hooks on the proboscis and neck are similar and all their roots are directed backwards. R.T.L.

756—Recueil de Médecine Vétérinaire.

- a. GUILHON, J. & RIOUX, J., 1949.—“Recherches sur le traitement de la dicrocoeliose ovine par la foudaine.” 125 (9), 385-400.

(756a) Fouadin (American brand) does not kill *Dicrocoelium lanceolatum* [= *D. dendriticum*] but inhibits egg production. It is useful in suspending contamination of pastures by infected sheep when given as an intramuscular injection of 6.3% in the dose of 7-9 mg. per kg. live body-weight for two consecutive days, or two injections of 20 c.c. to sheep of 30 to 40 kg. When treatment is repeated every two months from March to October or November there should be a noticeable reduction in the metacercariae. R.T.L.

757—Rendiconti della R. Accademia dei Lincei.

- a. BRONZINI, E., 1949.—“Ricerche parassitologiche e biologiche sul materiale del Giardino Zoologico di Roma.—I. Osservazioni parassitologiche su alcuni mammiferi di recente cattura ed importazione.” Ser. 8, 6 (6), 739-742.

(757a) Faecal examinations of 64 mammals belonging to 25 species made during the first few weeks after their arrival at the Rome Zoological Gardens from Africa and South America, showed that two species were infected with trematodes, two with cestodes and 19 with nematodes. [The ova are illustrated but not identified.] Of the animals which died during the acclimatization period one had cestodes, four had *Ascaris* sp. and four had *Trichuris* sp. Microfilariae were present in the blood of *Otocyon cafer*. P.M.B.

758—Rendiconti. Istituto Lombardo di Scienze e Lettere. Classe di Scienze Matematiche e Naturali.

- a. PALUMBI, G., 1949.—“Particolarità strutturali della parete del tubo genitale femminile di *Ascaris megaloccephala*.” Year 1947, 80 (1), 148-150.

759—Report of the Australian and New Zealand Association for the Advancement of Science.

- a. GORDON, H. McL., 1949.—“Epidemiology and the efficient parasite (with special reference to the nematode parasites of domestic animals).” 27th Meeting (1949), pp. 131-141.

(759a) A parallel is drawn between the clearing up of an epidemic and the cure of an individual, with the herd and single animal as the units concerned. The epidemiology of helminth diseases is discussed in relation to the “efficient” parasite. Definitions of parasitism from the points of view of the epidemiologist, zoologist, protagonist of preventive veterinary medicine, ecologist and parasitologist are quoted. The behaviour of parasites in relation to biological “efficiency” and pathogenicity are discussed. Pathogenicity cannot

necessarily be regarded as a manifestation of maladjustment between host and parasite, it is merely incidental to the type of biological relation concerned, in much the same way as phenomena of resistance and immunity. That pathogenicity and immunity are incidental to the host-parasite relationship emphasizes the significance of the sporadic occurrence of outbreaks and the erratic and unpredictable phenomena associated with immunity. Gordon then comments on the "self-cure" phenomenon. "Is the reaction a truly immunological phenomenon? Is it a "shock" effect, and if so, is it an allergic or anaphylactic effect confined to the parasite, or is it such an effect on the host with secondary effects on the parasite? Does an anaphylactic type of reaction produce histamine or related compounds which disturb amine metabolism of the parasite? Is it a biologically useful precaution to ensure that there is a turnover in the parasite population? Is it designed to protect the parasite against extermination by protecting the host against an overwhelming, fatal infestation?" The biotic potentials of *Haemonchus contortus*, *Trichostrongylus* spp. and *Oesophagostomum columbianum* are compared, host range, resistance of the free-living stages and egg output from a moderate infestation being used as criteria. Epidemiological cycles are considered in relation to seasonal and climatic conditions, nutrition, ageing of host animals, animal husbandry, coincidence of factors favouring increases in helminth populations (e.g. spring increase in *H. contortus* and highly susceptible hosts in the form of lambs and lactating ewes) and life-cycles. The life-cycle is divided into two stages (parasitic and free-living) and two phases (contamination and infection) for purposes of a better appreciation of the potentialities of the situation and clearer indications of multiple lines of attack on parasitic disease. Gordon questions whether the "efficient" parasite is safely left alone or is more easily controlled. Acceptance and adjustment to parasitism may be possible, but only at the expense of economic efficiency. Conceptions of host-parasite relations in domestic animals may be distorted due to abnormalities arising from the ways in which they are confined and overcrowded. The phenomena of immunity, resistance, "self-cure" and other manifestations of apparent "incompatibilities" between host and parasite may only have arisen in the course of domestication and in consequence of the resulting tremendous increase in numbers. Basic information on the immunity aspects of host-parasite relationship should perhaps be sought in wild animals, or in domestic animals exposed only to light infestations.

H.M.C.L.G.

760—Report of the Chief of the Bureau of Entomology and Plant Quarantine. U.S. Department of Agriculture.

- a. UNITED STATES BUREAU OF ENTOMOLOGY & PLANT QUARANTINE, 1949.—
"Nematodes infesting potatoes." Year 1948-49, pp. 19-20.

(760a) 29,224 soil samples representing 232,910 acres in the principal potato growing areas of the eastern, mid-western and southern States of the U.S.A. failed to reveal any foci of infection with *Heterodera rostochiensis* outside Long Island, N.Y. 51,674 samples from 37,545 acres resulted in adding 1,681 acres to the area known to be infected on Long Island. At the end of June 1949, infestations were known to occur on 8,168 acres of which 7,557 acres lie within and near Hicksville village in Nassau County; the remaining 611 acres are on 14 scattered properties in westerly Suffolk County. Compensation was paid by the Federal Government and the State of New York to owner-occupiers of 2,418 acres and by the State of New York to occupiers of 921 rented acres which had been withheld from potato and tomato production under the Federal-State Compensation Programme. To conform with quarantine requirements and prescribed methods of washing or treating potatoes grown on regulated lands, local growers financed and erected a processing plant at a cost of 200,000 dollars. Potato rot nematode is known on the American continent only in a small area near Aberdeen, Idaho, where its incidence is light and limited to less than 20 farms, and on a few potato farms in the Province of Prince Edward Island, Canada. In 1949 no infection was found in 221,643 bushels of potatoes from 1,024 growers in 66 counties.

R.T.L.

761—Report of the Commonwealth Scientific and Industrial Research Organization, Australia.

- a. AUSTRALIA. COMMONWEALTH SCIENTIFIC & INDUSTRIAL RESEARCH ORGANIZATION, 1949.—"V. Animal health and production. VII. Sheep: internal parasites. VIII. Cattle: internal parasites." 1st (1948-49), pp. 33-35, 44-45, 47-48.

(761a) This report contains brief summaries from the Animal Health Research Laboratory, Melbourne, of work on (i) the biochemical character of the serologically active lipid fraction of *Haemonchus contortus*. This lipid probably belongs to a chemically distinct class of lipoidal substances peculiar to helminths; (ii) the mode of action of phenothiazine as an anthelmintic; (iii) the intermediary metabolism of nematode parasites; (iv) the relative importance of aerobic metabolism in small nematodes of the alimentary tract; (v) the biological significance of haemoglobin in nematode parasites. The Veterinary Parasitology Laboratory, Queensland, has devoted its attention to the study of cattle parasites. The Division of Animal Health has found that phenothiazine is somewhat less effective against *Chabertia ovina* than against *Oesophagostomum columbianum*. Hexachlorethane administered into the rumen was highly effective against *Haemonchus contortus*, *Paramphistomum* spp. and *Cotylophoron* spp. It showed some effect against *Trichostrongylus* spp. but was relatively ineffective against *O. columbianum*. Doses of 0.5-2 gm. of lead arsenate into the rumen were usually effective against *H. contortus* but not against *O. columbianum*. R.T.L.

762—Report of the Department of Agriculture, Fiji.

- a. GARNETT, K. J., 1949.—"Disease control." Year 1949, pp. 23-25.

(762a) Although internal parasites are considered to be one of the most serious pathogenic factors affecting livestock in Fiji, it has not yet been possible to commence the survey planned in 1948 and for which a veterinary officer received special training in Australia and for whom the necessary equipment has been obtained. Severe mortality and economic loss from poor carcass weights in calves, pigs and goats continue. Internal parasites have also been serious in poultry and have been the most important factor in decreasing the efficiency of horses. R.T.L.

763—Report of the Department of Agriculture, Jamaica.

- a. ANON., 1949.—"Report on the Veterinary and Livestock Divisions: A. Disease control." Year 1948-49, pp. 13-15.

(763a) Conditions in Jamaica are stated to be ideal for the propagation of all kinds of internal parasites. A large number of young stock suffered to a greater or lesser degree. *Ascaris vitulorum* was common. *Haemonchus contortus*, *Oesophagostomum* spp. and *Trichostrongylus* spp. caused deaths in calves between six and eight months old. It was found impossible to maintain high grade goats without regular anthelmintic dosing. *Stephanurus dentatus* was common in pigs. Strongylosis in horses and mules was widespread. *Ancylostoma caninum* was frequently seen in dogs over six to eight weeks old. Low or medium grades of infection with intestinal helminths greatly accentuated the susceptibility of all animals to other diseases. R.T.L.

764—Report of the Department of Science and Agriculture, Barbados.

- a. HUTSON, L. R., 1949.—"Animal health." Year 1948-49, pp. 77-81.

(764a) Twelve helminths are listed from domesticated animals in Barbados: *Metastrongylus elongatus*, *Arduenna strongylina*, *Ascaris lumbricoides*, *Oesophagostomum* sp. and *Stephanurus dentatus* from pigs; *Haemonchus contortus*, *Oesophagostomum venulosum* and *Trichuris ovis* from sheep; *Oxyuris equi* from horses; *Oxyspirura mansoni*, *Ascaridia galli* and *Raillietina echinobothrida* from hens. R.T.L.

765—Report of the Director of Agriculture, Trinidad and Tobago.

- a. ANON., 1949.—“Pests of vegetable crops.” Year 1949, p. 15.

(765a) In Trinidad, *Heterodera marioni* causes appreciable damage in vegetable gardens of low fertility. R.T.L.

766—Report of the Ontario Veterinary College.

- a. KINGSCOTE, A. A., 1949.—“Department of Parasitology.” Year 1949, pp. 27–36.
b. KENNEDY, A. H., 1949.—“Paragonimus infection in a ranch-raised fox.” Year 1949, pp. 132–137.

(766a) After a general review of the work during 1949 in the Department of Parasitology, covering protozoology, entomology and helminthology, details are given on the progress of work on the control of *Fascioloides magna* in the Burwash area, District of Sudbury, Ontario. Eradication of snails by the use of copper sulphate since 1946 has prevented damage being caused by flukes for two years. The chemical was placed in streams, in bags at stream heads when the ground was frozen, in flood water and on snow on the banks of a ravine; in the last case, no snails were found in the summer after treatment during the previous winter. Experiments *in vitro* with δ -benzene hexachloride as a molluscicide were carried out on species of *Helisoma*, *Fossaria* and *Physa*; after 24 hours' exposure to the chemical all snails were partially or completely paralysed, but 94% recovered completely within 12 hours when transferred to fresh water; field trials will be made to determine its value under natural conditions. To check the spread of *Fascioloides magna* an exceptionally heavily infected elk herd on the banks of the Ottawa River was slaughtered. A survey indicates that *F. magna* is present in 11 out of 16 counties or districts of Ontario; the distribution of snails in the province is being recorded. P.M.B.

(766b) A fatal case of paragonimiasis in a fox bred on a ranch in south-western Ontario is attributed to feeding with watercress from a stream in an area where *Pomatiopsis lapidaria*, the probable intermediate host of *Paragonimus*, was known to be present. Six large, tumour-like masses each containing two *Paragonimus* sp. were found embedded in the lung tissue. P.M.B.

767—Res. Buenos Aires.

- a. LÓPEZ ARIAS, A., 1949.—“Régimen alimenticio y parasitosis internas de los ovinos.” 17 (374), 23843–23845.

(767a) For the control of helminths in sheep, particularly of *Haemonchus contortus*, López Arias recommends (i) frequent dosing with carbon tetrachloride and/or copper sulphate, (ii) frequent changing of pastures, especially for lambs, (iii) special attention to the nutrition of ewes during lactation and rectification of mineral deficiencies with calcium and phosphate, (iv) drainage of land liable to flooding, or application of copper sulphate, (v) preventing drinking troughs from overflowing and forming pools of water and (vi) rotation of temporary grassland with other crops, particularly corn and leguminous crops. P.M.B.

768—Revista Agronómica. Porto Alegre.

- *a. SOUZA, O. P. C. DE, 1949.—[Stronglamine, a new drug for control of worms in domestic animals.] 13, 112.
*b. CORRÊA, O., 1949.—[*Spirocercosa lupi* in dog.] 13, 117–119. [In Portuguese.]
*c. CORRÊA, O., 1949.—[Canine ancylostomiasis.] 13, 168–171. [In Portuguese.]

769—Revista Argentina de Urología.

- *a. TRABUCCO, A., MÁRQUEZ, F. J. & KATZ DINER, L., 1949.—“Sobre un caso de obstrucción urinaria con hidatidosis retrovesical.” 18, 171–174.
*b. ERCOLE, R., 1949.—“Nefrectomía parcial por quiste hidatídico del riñón.” 18, 182–187.

770—Revista de la Asociación Médica Argentina.

- a. NOGUERA, O. F. & QUINTANA, C. DE LA, 1949.—“Infarto anémico con ruptura de corazón, motivado por un quiste hidatídico del pericardio.” 63 (653/654), 216-218.

771—Revista Brasileira de Cirurgia.

- a. OLIVEIRA, C. DE, 1949.—“Um caso de cisticercose cerebral.” 18 (12), 993-998. [English, French & German summaries p. 998.]

772—Revista Brasileira de Medicina.

- a. MACIEL, H., 1949.—“Tratamento intensivo das esquistossomoses.” 6 (7), 491-492.
 b. PAULA, H. DE, 1949.—“Látex do *Ficus officinalis*. Estudo da acção anticoagulante e método de extração.” 6 (10), 669-670. [English summary p. 670.]
 c. CASTRO, E. L., 1949.—“As helmintoses no operário da indústria de óleo mineral e gasolina.” 6 (11), 745-746.

(772a) Since 1923 Maciel has successfully treated schistosomiasis with a total of 0.95 gm. of potassium antimony tartrate, giving 0.05 gm. on the first day and 0.1 gm. on each of the nine following days, diluted to 1% in physiological saline or distilled water. This dosage was well tolerated in 80% of cases but in 20%, owing to toxic effects, it had to be distributed over 19 days with less successful results. Children under 15 years of age received 0.003 gm. per kg. body-weight daily for 10 days. Other drugs in general use for schistosomiasis are reviewed.

P.M.B.

(772b) After referring to the anthelmintic action of *Ficus officinalis* latex, its proteolytic activity and capacity for digesting blood clots, Paula describes the production of an amorphous powder free of rubber substance and soluble in water, which prevents coagulation when 2 mg. are added to 1 c.c. of human blood.

R.T.L.

773—Revista Chilena de Higiene y Medicina Preventiva.

- a. NEGhme, A. & SILVA, R., 1949.—“Epidemiología de las parasitosis intestinales en el medio rural de Chile. I. Comunicación.” 11 (1), 17-23. [English summary p. 23.]
 b. NEGhme, A. & SILVA, R., 1949.—“Epidemiología de las parasitosis intestinales en el medio rural de Chile. II. Comunicación. Primeros resultados del censo enteroparasitario en las provincias centrales.” 11 (1), 25-35. [English summary p. 34.]
 c. MENESES RUBIÁNEZ, C. & AVENDAÑO ESCALANTE, S., 1949.—“Estudio comparativo entre los métodos de Hall y Graham para el diagnóstico de la oxyuriasis.” 11 (1), 45-47.
 d. ANSELMO, J., BAHAMONDES, S., IPINZA, I., LAGOS, R. & CORTÉS, G., 1949.—“Contribución al estudio de la triquinosis inaparente.” 11 (1), 51-53. [English summary p. 53.]

(773a) As a result of an epidemiological survey the authors describe the poor living conditions in rural areas of central Chile. The transmission of helminth diseases is largely due to the lack of sanitation, the unhygienic water supply, overcrowding and malnutrition.

P.M.B.

(773b) Faecal examination of 15%-20% of the population of certain rural districts in the Chilean provinces of Aconcagua, Santiago, Concepción and Osorno showed widely varying incidence of infection with *Ascaris lumbricoides*, *Trichuris trichiura*, *Enterobius vermicularis* and *Hymenolepis nana*. On an average, the occurrence of *Ascaris* and *Trichuris* is three times as high in rural areas of Chile as in the principal cities.

P.M.B.

(773c) Tests were made on 100 children to compare Hall's cellophane strip and Graham's cellulose tape methods for the diagnosis of *Enterobius vermicularis* at a children's home at Viña del Mar in Chile. Graham's method revealed the presence of infection in 36 out of 52 cases found negative by Hall's method; 48% positive cases were found by the cellophane strip and 88% by the cellulose tape method.

P.M.B.

(773d) Post-mortem examinations of 135 patients in two Santiago hospitals revealed the presence of cysts of *Trichinella spiralis* in five cases (3.7%).

P.M.B.

774—Revista Clínica de São Paulo.

- *a. COUTINHO, J. O., 1949.—“Moluscos do gênero *Australorbis* Pilsbry, 1934 (Mollusca Planorbidae).” 25 (1/2), 1-6.
- *b. COUTINHO, J. O., 1949.—“Diagnóstico da esquistossomose pela intradérmica com antígenos de esquistossomos adultos.” 25 (1/2), 7-15.
- *c. COUTINHO, J. O., 1949.—“Contribuição para o estudo do hospedador intermediário do *Schistosoma mansoni* em Santos, São Paulo.” 25, 31-38.

775—Revista Ecuatoriana de Higiene y Medicina Tropical.

- a. RODRÍGUEZ M., J. D., GÓMEZ LINCE, L. F. & MONTALVÁN C., J. A., 1949.—“El *Opisthorchis guayaquilensis*. (Una nueva especie de *Opisthorchis* encontrada en el Ecuador.)” 6 (1/4), 11-24. [English summary p. 24.]
- b. RODRÍGUEZ M., J. D., VILLAMIZAR, L. & RÍOS, T., 1949.—“La enterobiasis en Guayaquil. Revisión de conocimientos anteriores.” 6 (1/4), 39-48.

(775a) Following the discovery of operculated eggs of an unknown helminth during a routine faeces examination at the National Institute of Health, Guayaquil, Ecuador, similar eggs of an average size $31.5 \mu \times 13.5 \mu$ were found in the faeces of 8 out of 214 persons examined at Pedro Pablo Gomez and in 10 out of 31 at the neighbouring villages of La Planchada and El Abuelán. An anthelmintic administered to one person failed to remove any worms. Provisional identification of the eggs as those of *Opisthorchis* sp. was later confirmed by the finding of adult flukes named *O. guayaquilensis* n.sp. in the bile ducts of three dogs which were passing similar eggs in the faeces. The new species has a post-ovarian section of yolk glands which differentiates it from *O. felinus*, *O. viverrini* and *O. noverca*. It is distinguished from *O. (Amphimerus) pseudofelinus* as the post-ovarian yolk glands are arranged longitudinally and the testes are lobed. This is thought to be the first record of the occurrence of an *Opisthorchis* in the Western hemisphere. P.M.B.

(775b) By using Graham's cellulose tape technique enterobiasis was diagnosed in 20% of 50 boys and in 16% of 50 girls at a children's hospital in Guayaquil, Ecuador. To obtain exact figures of incidence five or six examinations on different days are advised. Graham's technique is preferred to Hall's cellophane strip method. P.M.B.

776—Revista da Faculdade de Medicina Veterinária. São Paulo.

- a. RIBEIRO, P. DE ASSIS, 1949.—“Incidência das causas de rejeição de bovinos abatidos no Brasil Central—prejuízo causado pelas mesmas nos anos de 1946-47.” 4 (1), 167-183. [English summary pp. 182-183.]

(776a) Hydatid was one of the four principal causes of the rejection of carcasses and viscera of cattle slaughtered in central Brazil in 1946 and 1947. In 1946 this amounted to 15.69% and in 1947 it was 16.32%. The incidence of *Cysticercus bovis* in cattle was 1% in 1946 and 1.52% in 1947. R.T.L.

777—Revista de la Facultad de Medicina. Bogotá.

- a. PEÑUELA ROZO, A., 1949.—“Complicación pulmonar de las infestaciones parasitarias.” 18 (2), 65-86.

(777a) The three principal sources of pulmonary complications arising from various helminth infections are: (i) migration of larvae, (ii) direct action of adult worms, larvae or eggs and (iii) indirect action of toxins or anaphylaxis. A study of *Strongyloides stercoralis* is made with detailed reference to its history, distribution, life-cycle, modes of infection, pathology, pathogenicity, symptomatology, diagnosis, treatment and prophylaxis. Loeffler's syndrome and eosinophilia in relation to pulmonary ascariasis are discussed. P.M.B.

778—Revista de la Facultad de Medicina Veterinaria. Lima.

- a. SANTIVÁÑEZ M., J. & CUBA C., A., 1949.—"Quiste hidático en *Lama glama pacos* o alpaca." 4 (1/4), 22-24.
- b. ARNAO, M., GONZÁLES, E. & ARBAIZA, E., 1949.—"Parásitos en *Lama glama pacos* o alpaca." 4 (1/4), 64-65.
- c. RAKOWER, M., 1949.—"*Cysticercus cellulosae* en el encéfalo de un perro." 4 (1/4), 113-115.

(778a) Hydatid cysts were present in the liver and lungs of alpacas, *Lama glama pacos*, from the Department of Puno in Peru. A list of the other hosts in which hydatid is known to occur is compiled from Meggitt's "Cestodes of Mammals", 1924. R.T.L.

(778b) The helminths found in *Lama glama pacos* in the alpaca zone of the Department of Puno, Peru, are tabulated, viz., *Fasciola hepatica*, *Taenia helicometa* (?), *Cysticercus alpacae*, *Oesophagostomum* sp., *Nematodirus* sp., *Trichuris* sp. and *Dictyocaulus* sp. R.T.L.

(778c) Rakower reports, with clinical history and post-mortem findings, the occurrence in Peru of *Cysticercus cellulosae* in the cerebral hemispheres of a dog six years of age. R.T.L.

779—Revista de la Facultad de Medicina Veterinaria y de Zootecnia. Bogotá.

- a. RIVERA ROJAS, M., 1949.—"Estudio sobre la distomatosis equina." 17 (97), 125-140.

(779a) Rivera Rojas describes an outbreak of liver-fluke infection which caused many deaths among foals at a cavalry stud farm at Sogamoso, Colombia. This is stated to be the first record of the occurrence of this infection in horses in Colombia. Treatment of various cases with extract of male fern, carbon tetrachloride with oil of chenopodium, "Avicholina", "Saguaypicida" and "Terlosis" was ineffective. P.M.B.

780—Revista da Flora Medicinal. Rio de Janeiro.

- a. GODOY, V. M. DE, 1949.—"Um caso de farmacopatologia." 16 (8), 331-340.

(780a) Godoy has found that the roots of *Piper umbellatum* L., syn. *Heckeria umbellata* (L.) Kunth, may be attacked by the root-knot nematode, *Heterodera marioni* [he uses the earlier name *Heterodera radicolica*]. He describes the root galls, gives a brief account of the parasite, its spread and methods of control. T.G.

781—Revista Grancolombiana de Zootecnia, Higiene y Medicina Veterinaria. Caracas.

- a. RAMÍREZ VILLAMEDIANA, J. J. & VERGANI, F., 1949.—"Contribución al estudio del ciclo evolutivo de la *Fasciola hepática* en Venezuela." 3 (10/12), 817-838.

(781a) Miracidia of *Fasciola hepatica*, hatched under laboratory conditions, were used for the experimental infection of 100 specimens of *Limnaea cubensis*, which were collected from the banks of irrigation canals near Caracas. Most of the miracidia penetrated the snails within an hour of exposure and an hour later a small number of dead miracidia were found. The survival of the miracidia was found to vary with temperature, from 6-8 hours in water at 30°C., up to 48 hours in a refrigerator. In a saline solution they died within 10 minutes, in 1% copper sulphate solution within 8 minutes, and in varying dilutions of copper sulphate up to 1:100,000 they survived up to 6 hours. Owing to the large numbers of miracidia present, 50% of the snails died during the development of the sporocysts. Normal development took 41 days and was followed by rapid encystment of the cercariae. P.M.B.

782—Revista de Higiene e Saúde Pública. Rio de Janeiro.

- a. MOLLER MEIRELLES, M., 1949.—“Helminthiasis em soldados do exército da guarnição da Capital da República.” 7 (1/2), 23-27.

(782a) At Rio de Janeiro 460 (80.6%) out of 571 apparently healthy Brazilian soldiers were positive for helminths. Tables show (i) the numbers infected with one, two, three and four species respectively and (ii) the incidence of *Necator americanus* (51.3%), *Ascaris lumbricoides* (42.5%), *Trichuris trichiura* (27.7%), *Strongyloides stercoralis* (11.2%) and *Schistosoma mansoni* (0.7%); both single and multiple infections are indicated in each case.

P.M.B.

783—Revista de Investigaciones Agrícolas. Buenos Aires.

- a. GUTIÉRREZ, R. O., 1949.—“Nuevo género y especie de nematode saprobionte.” 3 (4), 403-412

(783a) *Epimenides extricatus* n.g., n.sp. is a saprophytic nematode found in decaying organic material in Brazil. The new genus is differentiated by the author from *Rhabditis*. In the new species the gonad is monodelphic and prodelphic and the vulva is situated in the posterior part of the body. The bursa of the male has 8-9 pairs of rays of which four are usually pre-anal.

R.T.L.

784—Revista Kuba de Medicina Tropical y Parasitología.

- a. FAIGUENBAUM, I. & FANTA, E., 1949.—“Tratamiento biológico de la hidatidosis.” 5 (11/12), 162.

785—Revista Médica de Córdoba.

- a. HEINERT, J. F., 1949.—“Paragonimiasis pulmonar en el Ecuador.” 37 (7), 289-309.

(785a) [This paper also appeared in *Rev. Kuba Med. trop. Parasit.* 1947, 3, 101-106. For abstract see *Helm. Abs.*, 16, No. 615.]

786—Revista de Medicina e Cirurgia de São Paulo.

- a. HERMETO, Jr., S., 1949.—“A esplenomegalia e ascite na esquistosomíase de Manson-Pirajá da Silva. Indicação da operação de Talma, anterior à esplenectomia. Estudo da casuística pessoal.” 9 (10), 591-615. [English summary p. 612.]

787—Revista de Medicina Veterinaria. Buenos Aires.

- a. ROVEDA, R. J., BARDI, S. J., RIGUELET, R. A. & DECOUD, A., 1949.—“Nematodes del ovino. Relación entre su número y huevos en las heces.” 31, 78-92.
b. GELORMINI, N., 1949.—“Enteritis parasitaria ovina por *Nematodirus*.” 31, 180-186.

788—Revista de Medicina Veterinaria. Montevideo.

- a. TRENCHI, H., 1949.—“*Raillietina* (*Raillietina*) *tetragona* (Molin, 1858).” Año XXV, 4 (45/46), 872-876.
b. SZYFRES, B. & TRENCHI, H., 1949.—“Notas parasitológicas. Algunos parásitos de los roedores de laboratorio.” Año XXV, 4 (47/48), 929-933.

(788a) Trenchi reviews the morphology, geographical distribution and pathogenicity and discusses possible intermediate hosts of *Raillietina* (R.) *tetragona* in poultry in Uruguay.

P.M.B.

(788b) *Passalurus ambiguus*, *Syphacia obvelata* and *Paraspidodera uncinata* were found in the rodents in use as laboratory animals in Montevideo.

R.T.L.

789—Revista de Paludismo y Medicina Tropical. Mexico.

- a. TORRES MUÑOZ, A. & RUIZ REYES, F., 1949.—“El ‘gammexane’ en la lucha contra los simúlidos. (Nota preliminar.)” 1 (2), 69-73.
- b. SOBERÓN y PARRA, G. & PELÁEZ, D., 1949.—“Un caso importado de filariasis doble por *Loa loa* y *Acanthocheilonema perstans*.” 1 (2), 75-88.

(789a) Preliminary trials with Gammexane in streams in Oaxaca, Mexico, showed that it is lethal to *Simulium* larvae for a distance of 300 metres downstream from the point of application. The best results were obtained by using blocks consisting of 200 gm. Gammexane, 200 gm. gypsum and 160 c.c. of a 5% solution of Triton X-100 detergent, enclosed in a hemp net attached to submerged vegetation or rocks. Preliminary laboratory tests showed that *Simulium* pupae taken from treated streams failed to develop to the adult stage.

P.M.B.

790—Revista de Sanidad y Asistencia Social. Caracas.

- a. BRICEÑO ROSSI, A. L., 1949.—“Primeros casos de filariasis a *Mansonella ozzardi* constatados en Venezuela.” 14 (5/6), 671-674.

(790a) Briceño Rossi found *Microfilaria ozzardi* in five out of 24 South American Indians of the Guahibas and Piapopas tribes who were resident in the Guárico area of Venezuela and who originated from the upper parts of the Orinoco and Meta Rivers. The infection, stated to be the first record in Venezuela, appeared to be non-pathogenic. The vectors are thought to be *Anopheles* sp., *Aedes* sp. and *Culicoides* sp. [These cases are also referred to in a joint note by Briceño Rossi & Mayer, see No. 572f above.]

P.M.B.

791—Revista de Sanidad Veterinaria. Madrid.

- *a. DÍAZ DÍAZ, E., 1949.—“La helmintiasis en su relación con la suerovacunación de Dorset, las infecciones y la inmunidad bacterianas.” 4 (2), 181-197.
- *b. SANZ SÁNCHEZ, F., 1949.—“Normas generales sobre valoración y control de antihelmínticos.” 4, 659-688, 773-778.

792—Revista do Serviço Especial de Saúde Pública. Rio de Janeiro.

- a. DEANE, M. P., 1949.—“Sobre a incidência de filárias humanas em Manáus, Estado do Amazonas.” 2 (3), 849-858. [English summary pp. 853-854.]
- b. DEANE, M. P., 1949.—“Sobre o valor do exame de sangue em gota espessa colhida às primeiras horas da noite para inquéritos de filariose de Bancroft.” 2 (3), 859-863. [English summary pp. 862-863.]

(792a) Blood smears from 2,405 of the inhabitants of Manáos, Brazil, taken during June to September 1948, between the hours of 7.0 and 9.30 p.m. revealed microfilariae of *Wuchereria bancrofti* in 48 (2%) and of *Mansonella ozzardi* in 15 (0.6%). The two species were never found in the same individual. As the incidence of infection with *W. bancrofti* in the different age-groups did not show much variation, and as most autochthonous cases occurred in one district of the town, the author concludes that the introduction of this infection is recent. *Culex fatigans* is thought to be the principal vector. Of the 15 cases with *M. ozzardi*, eight were contracted outside the town. The spraying of houses with DDT is being undertaken to check the spread of filariasis.

P.M.B.

(792b) Because it was thought probable that the examination of blood smears taken between 7.30 and 9.30 p.m. failed to reveal a considerable proportion of positive cases of *Wuchereria bancrofti* infection, 2 c.c. of blood taken between 11.30 p.m. and 3 a.m. from 968 of the inhabitants of Belém [= Para], Brazil, was examined by Knott's concentration method. Only 2% more positives were detected and it is therefore concluded that, for survey purposes, where the microfilariae show nocturnal periodicity, the former method is satisfactory.

P.M.B.

793—Revista de la Sociedad Mexicana de Historia Natural.

- a. BACIGALUPO, J., 1949.—"Primer caso humano de *Bertiella* sp.? en Sud America." 10 (1/4), 177-183.

(793a) A Paraguayan who had formerly lived in the Argentine passed helminth segments which were identified as *Bertiella* sp. The species could not be defined but it was thought to be probably *B. mucronata* which has once been recorded from a monkey in Paraguay. This is the first record of *Bertiella* in man in South America. P.M.B.

794—Revue Coloniale de Médecine et Chirurgie. Paris.

- *a. LEFROU, G., 1949.—"La gale filarienne et le crawl-crawl africain." 21 (163), 18-20.
*b. DEZEST, G., 1949.—"Considérations sur le parasitisme intestinal à Bamako, Soudan." 21 (167), 100.

795—Revue de Laryngologie, Rhinologie, Otologie.

- a. SOMERFELD, W. S., 1949.—"Sur la présence des sangsues dans les voies respiratoires supérieures." 70 (7/8), 332-337.
b. SIBONI, D., 1949.—"À propos de sangsues dans les voies respiratoires." [Correspondence.] 70 (11/12), 547-548.

(795a) Somerfeld describes the symptomatology and methods of removal of leeches in the upper respiratory passages, based on a study of approximately 100 cases observed by him in ten years in the Valley of Jezreel, Palestine. P.M.B.

796—Revue de Médecine Vétérinaire. Lyon et Toulouse.

- a. DUMAZET, M. & TOURATIER, L., 1949.—"Parasitisme intestinal d'une meute par vers ronds. Essais de traitement par la phénothiazine." 100, 479-483.

(796a) Phenothiazine in doses of 0.2 gm. per kg. live body-weight proved a satisfactory anthelmintic for 50 dogs with severe clinical symptoms associated with the presence of hookworm, ascaris and trichuris eggs in their faeces. R.T.L.

797—Revue Médicale du Moyen Orient.

- a. MAJDALANI, E. & ACOURY, H., 1949.—"Un cas de tachycardie paroxystique due aux ascaris." 6 (4), 481-483.

798—Revue Neurologique.

- a. GOINARD, P., DESCUNS, P. & GARRÉ, 1949.—"Formes anatomo-cliniques des kystes hydatiques du crâne et du cerveau." 81 (5), 408-410.

799—Rhodesian Tobacco Journal.

- *a. DAULTON, R. A. C., 1949.—"Control of root knot eelworms in tobacco." 1 (6), 51-55.

800—Riforma Medica. Naples.

- a. ALLEGRA, G., 1949.—"Le varie frazioni degli acidi grassi insaturi del siero di sangue nell'anemia da anchilostoma." 63 (9), 198-201.
b. CANNAVO, L. & CARUSELLI, M., 1949.—"L'anchilostomiasi." 63 (40), 953-955.

801—Rivista di Zootecnia.

- a. [BORGIOI, E.], 1949.—"Vermi parassiti e verminosi dei maiali." 22 (3), 96-98.
b. [BORGIOI, E.], 1949.—"La verminosi negli ovini." 22 (4), 135-137.

802—Royal Melbourne Hospital Clinical Reports.

- a. SYME, G. R. A., 1949.—"Hydatid cyst of the head of the pancreas." 20, 54-56.

803—Sad i Ogorod. Moscow.

- a. GERASIMOV, B. A., 1949.—[Stem eelworm of onion and garlic.] Year 1949, No. 9, p. 68. [In Russian.]

(803a) Gerasimov, in a short note, describes the symptoms and damage done by stem eelworms to garlic and onions in many districts of Russia. As a method of diagnosis he advises that the onions should be cut into small pieces and placed with water in a tube. The sediment should be examined one to two hours later under a dissecting microscope. He recommends rotation of crops as a means of control, and that seeds should be collected only from healthy plants grown on land free from eelworm. During the harvest all diseased plants should be collected and destroyed.

C.R.

804—Sang. Paris.

- a. MULLER, B., RAOUL-DUVAL, P., BAFFIE, Y. & MARANDON, G., 1949.—"Grande éosinophilie sanguine par strongyloïdose intestinale. Échec des traitements employés. Leucose aiguë terminale." 20 (1), 69-76.

(804a) [This paper also appeared in *Lyon méd.* 181, 346-352. For abstract see *Helm. Abs.*, 18, No. 418a.]

805—Sardegna Agricola.

- *a. CONCAS, O., 1949.—[Strongylosis, present problem for our livestock heritage.] 27 (37/38), 3.

806—Semaine des Hôpitaux de Paris.

- a. PALEY, E. & PALEY, P. Y., 1949.—"Ouverture à la peau d'un kyste hydatique du foie latent, à travers la paroi thoracique, méconnu depuis 15 ans au moins." 25 (68), 2824.

807—Semana Médica. Buenos Aires.

- a. MORENO, J., 1949.—"Parásitosis y cáncer." Año 56, 1 (23), 814-817.
b. COUCEIRO, A., 1949.—"Esplenomegalia esquistosómica gigante. Esplenectomía." Año 56, 2 (29), 115-129.
c. VANNI, V., 1949.—"Nuevos ensayos de electroforesis sobre el quiste hidático." Año 56, 2 (31), 219-220.

808—Settimana Medica.

- a. MUCIO, G., 1949.—"Anguillulosi intestinale con grave quadro di disprotidemia." 37 (8), 196-199.

(808a) Mucio describes a case from Toscana in Italy with *Strongyloides stercoralis*, showing serious depletion of blood proteins accompanied by hypochromic anaemia with basophilic cells of reticulo-endothelial origin in the bone marrow. Treatment with gentian violet resulted in only a temporary slight improvement.

P.M.B.

809—Sicilia Medica.

- a. SCIRÈ, F., 1949.—"Echinococcosi del bacino, dell'articolazione coxo-femorale e del femore." 6 (7), 319-326. [English & French summaries pp. 325-326.]

810—Smallholder and Home Gardening. London.

- a. SLADER, W. B., 1949.—"Chrysanthemum eelworm control." 82 (2073), 9, 8.

(810a) Slader claims to have practically eliminated eelworm from his green-house chrysanthemums, without the use of warm water treatment, by choosing healthy plants from which to take cuttings, dipping the cuttings in 40% nicotine solution and using sterilized loam for the planting compost. By keeping the plants healthy, giving a little extra nitrogen and taking care not to use eelworm infested soil, eelworm disease has remained negligible.

M.T.F.

811—Svensk Jordbruksforskning.

- a. LINDFORS, T., 1949.—"Från växtskyddets arbetsfält." Year 1949, pp. 117-129.

(811a) Among other parasites the beet eelworm (*Heterodera schachtii*) is discussed. Investigations have shown that some oil crops now grown in Sweden are host plants for this nematode: most susceptible is *Crambe abyssinica*. In summer rape and white mustard fewer cysts were found. Linseed had no cysts. Experiments with D-D gave a reduction of the cyst frequency to one-third in the first year and the yield was considerably higher but the effect in the following year was not satisfactory. S.B.

812—Sveriges Utsädesförenings Tidskrift.

- a. TROTZIG, E., 1949.—"Fröodling och frökontroll i Östergötland." 59 (6), 252-260.

(812a) According to Trotzig clover rot and clover stem eelworm are very common in the province of Östergötland. Svalöf's Merkur and Weibull's Resistentia are much more resistant than the local strains, and Merkur is more resistant than Resistentia. These strains are, however, not sufficiently winterhardy. Breeding with selection in local strains is being done by the Swedish Seed Association at Tornby. S.B.

813—Therapeutische Umschau. Bern.

- a. STAMM, H., 1949.—"Aloxyn, ein neues Anthelminthicum bei Oxyuriasis." 6 (3), 33-35.

(813a) Stamm has treated enterobiasis in a series of 50 children by administering "Aloxyn" (one part aluminium-o-quinoline sulphate and nine parts of a sugar-containing excipient). The dosage was 0.5 gm. to 1.0 gm. (according to age) 3 times daily for one week, repeated after a week's interval: strict personal hygiene was enforced during the period of treatment. In 44 cases (88%) treatment was successful. The 6 resistant children were cured after a dose of chenopodium oil followed by double dosage of Aloxyn for 6 days. Follow-up examination from 2 to 4 months after treatment showed no recidives. There were no side effects. A.E.F.

814—Therapie der Gegenwart.

- a. NIKOLOWSKI, W., 1949.—"Gentiana-Violett in der Lokalbehandlung der Oxyuriasis." Year 1949, No. 5, pp. 142-145.
 b. ULLRICH, J. & KREBS, K. G., 1949.—"Die Behandlung der Oxyuriasis mit Farbstoffen der Triphenylmethanreihe." Year 1949, No. 5, pp. 151-152.
 c. ULLRICH, J., 1949.—"Die Behandlung der Oxyuriasis mit Farbstoffen der Triphenylmethanreihe. 2. Mitteilung. Klinische Prüfung eines Gentanaviolettpräparates." Year 1949, No. 8, pp. 239-242.

(814a) Nikolowski recommends the use of suppositories containing gentian violet and the painting of the peri-anal region after every defaecation and every evening with a 1%-2% aqueous solution of gentian violet in the treatment of pruritus ani associated with enterobiasis. A.E.F.

(814b) Ullrich & Krebs criticize the statement made by Trube [see Helm. Abs. 17, No. 733b] that the crystal violet preparation "Badil", used in the treatment of enterobiasis, is well tolerated. They believe that the drug has an irritant effect on the mucous membrane of the stomach and consider that further clinical trials are necessary. A.E.F.

(814c) Ullrich has treated a series of 29 cases of enterobiasis in adults with "Pyoverm" (pills containing 0.06 gm. gentian violet). The dosage was two pills three times a day for seven days. Thirteen patients were free of worms after a single course of treatment; eight were cured after a second treatment; in six cases there was reinfection; only two cases were completely refractory to gentian violet. The dosage was well tolerated and there were no side effects. A.E.F.

815—Tierzüchter.

- a. KÖHLER, H., 1949.—"Bekämpfung der Lungenwurmseuche der Kälber." 1 (9), 197-198.

(815a) Köhler briefly discusses measures for the control of lungworm disease in calves—anthelmintic treatment, adequate feeding, stall hygiene—with special emphasis on the importance of preventing the spread of infection by pasturing yearling calves separately from those in their second and third summers.

A.E.F.

816—Tijdschrift voor Diergeneeskunde.

- a. BEIJERS, J. A., 1949.—"Het leverbotvraagstuk." 74 (17), 703-704.

(816a) The annual direct and indirect losses from fascioliasis amongst sheep and cattle in the Netherlands vary from year to year according to climatic conditions. Doeksen estimates the annual losses at approximately 24 million gulden. These losses led to the appointment of a commission to facilitate an investigation of the many problems associated with this disease and to discover the most efficient, economical and practical form of prophylaxis. A second "working" commission under the chairmanship of Beijers and composed of scientists from all the interested government departments, was appointed to investigate the possible modes of spread of infection, length of survival under various conditions of the encysted cercariae, diagnosis of infection, the extent of the disease and losses in the country, the factors, e.g. state of nutrition, presence of trace elements etc., which influence the susceptibility of the host and the parasitocidal efficiency of various chemicals (e.g. hexachlorethane, distol etc.).

P.L.leR.

817—Toulouse Médical.

- *a. ANDRIEU, MONNIER, QUERCY & ENJALBERT, 1949.—"Fréquence actuelle des parasitoses intestinales dans la région toulousaine." 50 (8), 431-432.

818—Transactions of the British Mycological Society.

- a. DUDDINGTON, C. L., 1949.—"A new predacious species of *Trichothecium*." 32 (3/4), 284-287.

(818a) Duddington describes *Trichothecium flagrans* n.sp., a predacious hyphomycete which captures nematodes in three-dimensional networks of anastomosing loop hyphae.

J.B.G.

819—Transactions of the Illinois Academy of Science.

- a. WALTON, A. C., 1949.—"Parasites of the Ranidae (Amphibia). XIV." 42, 161-164.
b. REID, W. M., NICE, S. J. & MCINTYRE, R. C., 1949.—"Certain factors which influence activation of the hexacanth embryo of the fowl tapeworm *Raillietina cesticillus*." 42, 165-168.

(819b) Changes in osmotic pressure and in pH (3.0, 6.0, 8.0) failed to induce motility in the onchospheres of *Raillietina cesticillus* but a decrease from room temperature ($21 \pm 3^\circ\text{C}$) to 1°C . induced activity in 78.7% of 1,000 embryos, whereas only 0.1% of 1,000 controls maintained at room temperature showed motility. All embryos were killed within 17 minutes in 1% saline buffered to pH 3.6.

R.T.L.

820—Transactions of the Kansas Academy of Science.

- a. ACKERT, J. E. & FURUMOTO, H. H., 1949.—"Helminths of cats in eastern Kansas." 52 (4), 449-453.
b. SMITH, C. F., 1949.—"An analysis of the results of the examination of two hundred stools from chickens." 52 (4), 454-457.

(820a) From 131 cats in eastern Kansas, 3,772 helminth specimens were collected. Those commonly present were *Taenia taeniaeformis* (45%), *Toxocara mystax* (84.7%), *Ancylostoma caninum* (83%) and *Physaloptera felidis* (51%).

R.T.L.

(820b) The results of microscopical examination of faeces of poultry for helminth eggs showed an error of 48·8% when the birds were subsequently examined post mortem. The percentage for 200 birds was raised from 45·5% to 93·2%. The worm infections noted were *Ascaridia*, *Heterakis* and *Capillaria*. The species could not be identified from the eggs. R.T.L.

821—Transactions of the Royal Society of New Zealand.

- a. RICHARDSON, L. R., 1949.—“A review of New Zealand leeches.” 77 (5) [Report of the 6th Science Congress, May 20–23, 1947], pp. 201–202.
- b. RICHARDSON, L. R. & CLARK, A. E., 1949.—“Studies on the entozoa of man in New Zealand. Part III. A note on the incidence of *Enterobius vermicularis* (Linn.).” 77 (5) [Report of the 6th Science Congress, May 20–23, 1947], pp. 245–247.
- c. TETLEY, J. H., 1949.—“A resume of investigations on nematode parasitism in sheep in New Zealand.” 77 (5) [Report of the 6th Science Congress, May 20–23, 1947], pp. 247–249.
- d. DEMPSTER, G. O. L., 1949.—“Some health problems in Western Samoa.” 77 (5) [Report of the 6th Science Congress, May 20–23, 1947], pp. 307–310.
- e. WHITTEN, L. K., 1949.—“Parasitism as a factor in pasture farming.” [Abstract of paper presented at 7th Annual Conference of the New Zealand Society for Animal Production, May 20–23, 1947.] 77 (5) [Report of the 6th Science Congress, May 20–23, 1947], p. 400.

(821a) The New Zealand leech fauna gives valuable evidence against the view that bird transport is the means whereby leeches, either as adults or eggs, pass across salt water barriers; while it is rich in genera, the number of species is small but of a wide distribution. *Oligobdella novae-zealandiae* from Lake Takapuna was the first fresh-water species to be described although Parker in 1892 had earlier named *Branchellion rajae* from a ray. The only subsequent contributions were made by Benham, who described *Placobdella maorica* and *Hirudobdella antipodum* and noted the presence of *Limnobdella australis* and of a *Pontobdella* in elasmobranchs; he also described *Ornithobdella edentula* and *Notobdella nototherniae* from the Southern Islands. A doubtful early record of *Haemadipsa limbata* is still unconfirmed. Richardson states that a species of *Ichthyobdella* and one of *Platybdella* from Cook Strait, and a *Glossiphonia* of the *heteroclita* group from the shallow coastal lakes, are in process of description. Thus there are at least four marine species representing in New Zealand the genera *Pontobdella*, *Ichthyobdella*, *Platybdella* and *Branchellion*. All of these genera occur also in Australia, South America and the Antarctic. Of the fresh-water leeches, *Limnobdella australis* was probably introduced for medical purposes. *Hirudobdella antipodum* is a valid endemic species of an Australasian genus. *Oligobdella* is a genus as well known in the New World as in New Zealand. Noteworthy is the absence of the Indo-Malayan and Pacific *Haemadipsinae* and of non-sanguivorous land leeches except *Ornithobdella edentula*. R.T.L.

(821b) The incidence of *Enterobius* infection, determined from an examination of 521 NIH swabs (six swabs per person), varied from 45·5% in children 0–3 years of age to 86% in children 11–15 years of age. Forty adults examined showed 50% infected, with no difference in sex incidence. The gross infection rate was 55%. *Enterobius* infection is familial in nature, and 74% of 31 families examined were infected. Negative families, as a rule, had children all under school age, while families containing children of school age had one or more members infected. The incidence in families of three was 47% and in families of seven 73%. L.K.W.

(821c) Tetley reviews the epidemiological studies carried out at Massey Agricultural College. Infection with *Nematodirus* was confined to lambs under 9 months of age; older animals were resistant. Free-living stages could survive the winter and infect the new crop of lambs in the spring. *Haemonchus* and *Ostertagia* infections in lambs were derived from the ewes, which pass increased numbers of eggs during lactation. Heavy *Haemonchus* infections later in the autumn were probably due to auto-infection from the eggs passed by the lambs themselves. The elimination of parasites in the faeces of a single lamb was

recorded. A number of different species were expelled coincidentally, indicating the operation of some non-specific factor. The total number of worms eliminated was similar to that found in other similar animals at autopsy, suggesting that there was not a continual turnover of mature parasites.

L.K.W.

(821d) Approximately one-third of the population of Western Samoa show evidence of microfilariae in the blood. Dempster has found a similar incidence in Niue Island, and considers that the whole adult population probably becomes infected. The vector, *Aedes variegatus*, would be very difficult to control as it breeds in coconut shells, in knot holes and in the steps which are often cut in the trunks of the coconut palm. Intestinal parasites are common, in spite of the fact that continuous mass treatment has been given in recent years. The routine examination of patients admitted to Apia Hospital in 1936 showed that 40% harboured appreciable numbers of hookworms, 25% harboured roundworms and 45% whipworms.

L.K.W.

(821e) [This paper has already appeared in full in *Proc. annu. Conf. N. Z. Soc. Anim. Prod.*, 1947, 7th, pp. 129-134. For abstract see *Helm. Abs.*, 16, No. 300a.]

822—Transactions of the Royal Society of South Australia.

- a. JOHNSTON, T. H. & ANGEL, L. M., 1949.—“Larval trematodes from Australian freshwater molluscs. Part XIII.” 73 (1), 22-28.
- b. JOHNSTON, T. H. & MAWSON, P. M., 1949.—“Some nematodes from Australian hosts, together with a note on *Rhabditis allgeni*.” 73 (1), 63-71.
- c. JOHNSTON, T. H. & MUIRHEAD, N. G., 1949.—“Larval trematodes from Australian freshwater molluscs. Part XIV.” 73 (1), 102-108.

(822a) A xiphidiocercaria which occurred in 4% of *Planorbis isingi* collected at Tailem Bend, South Australia is described and named *Cercaria beckwithae* n.sp. It resembles most closely those of *Haematoloechus* spp. Attempts to obtain the cyst stage were unsuccessful but it is thought that the adult is a parasite of the lungs of frogs. An additional characteristic of the cercariae of these flukes is that the main excretory tubes enter the arms of the bladder at the tips. As *Cercaria tetradena* Johnston & Beckwith, 1945 is preoccupied it is renamed *C. tetradenoidea* nom. nov.

R.T.L.

(822b) Additional Australian hosts and localities are recorded for a number of nematode species already known in Australia. A rat-kangaroo (*Potorous tridactylus*) from King Island, Bass Strait, contained *Austrostrongylus potoroo* n.sp. which differs from other members of this genus in the form of the dorsal ray which is figured but not described. *Contracaecum podicipitis* n.sp. from *Podiceps cristatus* has very short interlabia. It differs from *C. torquatum* in the absence of labial denticles and from *C. ovale* and *C. praestriatum* in the shape of the lips and greater length of the spicules. The authors accept Kung's opinion that *Labiostongylus* and *Buccostongylus* are synonyms of *Zoniolaimus*. *B. setifer* becomes *Z. setifer* but as this is preoccupied by *Z. setifera* Cobb, 1898, *Z. chaetophorus* nom. nov. is suggested. *Onchocerca gibsoni* is now reported from the far north-eastern portion of South Australia. It occurred in the brisket of locally bred cattle at Miranda Station, adjacent to the Queensland border. *Rhabditis campbelli* Allgén, 1948 and *R. australis* Allgén, 1938 nec Cobb, 1893 are synonyms of *R. allgeni*.

R.T.L.

(822c) An echinostome cercaria with 35 collar spines is named *Cercaria natans* n.sp. It develops in *Planorbis isingi* which is also a host for the metacercaria. The pond snail *Amerianna* sp. and the tadpole of *Limnodynastes tasmaniensis* were successfully infected with the metacercaria. A closely allied cercaria with 37 collar spines occurred in *Amerianna pyramidata* and *P. isingi*. It encysts in these two snails and in tadpoles. A gymnocephalous cercaria, *C. lethargica* n.sp., is reported from *Plotiopsis tatei*. Its metacercariae were found in the muscles of *Gambusia* submitted to experimental infection.

R.T.L.

823—Trudi Zoologicheskovo Instituta, Akademiya Nauk SSSR.

- a. BICHOVSKI, B. E., 1949.—[Monogenetic trematodes from Iran fishes, collected by E. N. Pavlovski.] 8 (4), 870-878. [In Russian.]

(823a) Bichovski describes and illustrates *Dactylogyrus pavlovskyi* n.sp. from the gills of *Barbus grypus* and *B. sharpeyi*; *D. persis* n.sp. from the gills of *Barbus luteus*; *D. inutilis* n.sp. from the gills of *Barbus xanthopterus*; and *Ancyrocephalus* (sensu lato) *fluvialis* n.sp. from the gills of *Mugil abu zarudnyi*. A.E.F.

824—Tuberculology. Denver.

- a. GINÉS, A. R., 1949.—“The present state of hydatidosis in Paraguay.” 11 (1), 6-7.

825—Tuberkulosearzt. Stuttgart.

- a. BRANDT, M., 1949.—“Parasitäre Lungenfibrose durch *Oxyuris* (*Enterobius*) *vermicularis*.” 3 (12), 685-688.

(825a) At the post-mortem examination of a 59-year-old Berlin woman Brandt found no signs of the suspected tuberculosis but records that there was a non-specific, chronic fibrosis of the lungs. He found calcified egg-shells in the lungs and several immature ova which were indentified by both Vogel of Hamburg and Schüffner of Amsterdam as those of *Enterobius vermicularis*. Brandt discusses the three possible ways in which *Enterobius* could have reached the lungs: (i) via the mouth, trachea and bronchi; (ii) migration by the intestine (as with *Ascaris*); (iii) in the blood stream via the female genital organs. A.E.F.

826—Türk Tıp Cemiyeti Mecmuası. (Bulletins de la Société Turque de Médecine.)

- a. SARPYENER, M. A., 1949.—“Pott hastaligini ve kismen spondylite deformante'i taklit eden para vertebral adalelerin bir kyst hydatiqu'i.” [A case of hydatid cyst in para-vertebral muscles imitative of Pott's disease and spondylitis deformans.] 15 (1), 52-54. [Summaries in Appendix in English p. 3, and in Annexe Française p. 3.]
 b. MARMARALI, A., 1949.—“Askarit diarezi.” [Diarrhoea caused by ascariasis.] 15 (5), 247-251. [Summaries in Appendix in English p. 25, and in Annexe Française pp. 29-30.]

827—Ugeskrift for Landmaend.

- a. GRØNTVED, P., 1949.—“Havreaalen er ved at blive en alvorlig Fare for vor Korndyrkning.” 94 (31), 535-537.

(827a) During 1949 the oat nematode (*Heterodera major*) has been a severe pest in many fields of oats, barley and wheat in Denmark. The importance of a good rotation with not too many susceptible crops is pointed out. Wheat can be replaced with rye. A new variety of barley, Øtofte Fero, is not as susceptible as other modern varieties. S.B.

828—University of South California Medical Bulletin.

- *a. KESSEL, J. F., 1949.—“Filariasis in the South Pacific.” 1 (3), 20-22.

829—Växtskyddsnotiser.

- a. BORG, A., 1949.—“Några växtsjukdomar och skadegörare på lantbruksväxter i Västergötland 1949.” Year 1949, No. 6, pp. 6-10.

(829a) An attack of oat eelworm [*Heterodera major*] has been reported from the western part of the province of Skaraborg. S.B.

830—Verhandlungen der Deutschen Zoologen.

- a. GERLACH, S. A., 1949.—“Die Nematodenbesiedlung des Sandstrandes in der Kieler Bucht.” Year 1948, pp. 156–165.
- b. MATTES, O., 1949.—“Wirtsfindung und Wirtsspezifität bei Parasiten.” Year 1948, pp. 165–172.
- c. VOLZ, P., 1949.—“Nematodensukzessionen bei der Fallstreuersetzung im Walde.” Year 1948, pp. 398–401.

(830a) Gerlach lists 43 species of free-living nematodes found on the sandy beaches of Kiel Bay. One of the species is listed as *Theristus* n.sp. but no specific name or description is given.

A.E.F.

(830b) Mattes has carried out experiments with *Fasciola hepatica*, *Dicrocoelium dendriticum* and *Schistosoma mansoni* in an attempt to determine the nature of the complex relationships between parasite, intermediate host, and final host. He finds that the methods by which larvae select snail hosts are similar whether this is done actively or only passively: usually several related species of snail are selected by individual species of parasites although only one (or very few) species provide optimum conditions and may be described as chief intermediate hosts. Host specificity has gradually developed over a long period of relationship between parasite and host.

A.E.F.

(830c) Volz discusses the various “layers” (from recently fallen leaves down to humus and sand-humus mixtures) which are found in forests and lists the different types of free-living nematodes to be found in each.

A.E.F.

831—Věstník Československé Zoologické Společnosti.

- a. HAVLÍK, O., 1949.—“Doplňk k popisu několika středoevropských druhů rodu *Gordionus* (Nematomorpha, Chordodidae).” 13, 101–110. [English summary pp. 108–109.]
- b. HAVLÍK, O., 1949.—“Nový druh rodu *Gordius* (Nematomorpha) z Československa.” 13, 111–118. [English summary pp. 115–117.]
- c. RAŠÍN, K., 1949.—“Postembryonální vývoj vrtějšě *Leptorhynchoides plagicephalus* (Westrumb 1821).” 13, 289–294. [French summary pp. 293–294.]

(831a) Havlik describes the precloacal papillae in *Gordionus preslii*, *G. vidaceus* and *G. alpestris* and concludes that they are of less importance than the areoles [rounded or polygonal areas in the cuticle] for specific determination. Notes are given on the known distribution of the genus, several species of which are new to Czechoslovakia.

P.M.B.

(831b) *Gordius sinareolatus* n.sp. from an unknown host occurred in mountain streams in various parts of Czechoslovakia. It differs from all known species by its shorter length (40–60 mm.), white colour and the characteristic form of the anterior and posterior ends of the body in both sexes. White spots on the cuticle of the male, characteristic of many species of *Gordius*, are absent.

P.M.B.

(831c) *Leptorhynchoides plagicephalus*, a parasite of the sturgeon, is characterized both in the larvae and adult by numerous branching nuclei in the hypodermis. The larvae take from 2 to 3 months to develop in the intermediate host *Gammarus pulex*; during this time they form pedunculated appendages on the hepato-pancreas which eventually drop off, with the larvae inside, into the general cavity.

P.M.B.

832—Veterinaria.

- *a. SANCHEZ BOTIJA, R., 1949.—“Sobre la presencia del *Trichuris globulosa* en las cabras de España.” 13, 547–551.

833—Veterinaria y Zootecnia.

- *a. CHÁVEZ GARCÍA, C., 1949.—“Parásitos gastrointestinales de equinos.” 1 (1), 25–27, 29–31, 33–35.
- *b. RAMOS SACO, T., 1949.—“Enfermedades parasitarias de origen animal en el hombre.” 1 (2), 12–17, 19–22.

834—Vida Agrícola. Lima.

- *a. RUÍZ URBINA, H., 1949.—“El hexacloretano y el tetracloruro de carbono en la distomatosis hepática.” 26, 471, 473, 475-476.

835—Vida Agrícola. Lisbon.

- *a. SALVADOR, A. N., 1949.—[Veterinary medicine : parasitic diseases.] 11 (69), 6-7. [In Portuguese.]

836—Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i København.

- a. BERG, K., 1949.—“Notes on *Cercaria splendens* Szidat.” 111, 263-270.

(836a) *Cercaria splendens*, seldom found in Denmark, is now reported from *Acroloxus lacustris* taken from Torkeri Lake, near Hillerød. It measures nearly 3 mm. in length and has a ribbon-shaped tail with two broad tail blades. The mode of locomotion differs essentially from Szidat's description and resembles that of *Cercaria anchoroides* as observed by Ward. The cercariae arise in rediae. The redia has a rudimentary pharynx but no other characteristic features. It has no intestine and resembles a sporocyst. R.T.L.

837—Vinos, Viñas y Frutas.

- *a. VEGA, J., 1949.—“Determinación de la resistencia a la ‘anguilulosis’ de diversos portainjertos americanos y sus híbridos.” 45, 126-127, 129-131.

838—Wiener Klinische Wochenschrift.

- a. FRIEHS, H., 1949.—“Ueber Echinococcuszysten des Pankreas.” 61 (49), 853-857.

839—Wolboer. Pretoria.

- a. MÖNNIG, H. O., 1949.—“Die geskikste tyd vir behandeling. Bestryding van inwendige parasiete by skape.” No. 21, pp. 30-31. [In Afrikaans : English summary p. 36.]

(839a) Mönnig observes that the rains and the heat of the summer months in South Africa favour the spread of sheep helminths. During the winter months infection is acquired from damp pastures. Sheep should be treated towards the end of the winter with phenothiazine, to prevent the spread of infection in the summer. In the case of the nodular worm, few infective larvae will be picked up after the middle of May, and as there will be no further escape of young worms from the nodules three months later, the animals should be dosed with phenothiazine by the middle of August. Where animals have access to damp pastures the sheep should be dosed again in February. For the rest of the year the sheep should be dosed with a cheaper anthelmintic such as tetrachlorethylene against *Haemonchus*, *Trichostrongylus* spp. and other worms, whose larvae are more resistant and can survive the winter in small numbers. P.L.ler.

840—Yearbook. Institute of Inspectors of Stock of New South Wales.

- a. GORDON, H. McL., 1949.—“Recent advances in the treatment of internal parasites.” Year 1949, pp. 58-59, 61, 63-65, 69, 71-72.

(840a) Gordon gives a succinct account of the general principles governing the use of anthelmintics, with special reference to the treatment of nematodes in sheep. He briefly summarizes the advantages and drawbacks of the newer anthelmintics in the treatment of most of the domesticated animals and stresses the importance of their preventive rather than curative use. Parasitic gastro-enteritis is due to multiple infections and requires “multi-efficient” anthelmintics. Immature worms are often more resistant than adults. The object of control measures should be to restrict the worm population to lower than subclinical

levels and not merely to prevent outbreaks. Phenothiazine is the only drug at present capable of reducing subclinical infection to harmless levels, but the dose is large and relatively costly and it stains the fleece.

R.T.L.

841—*Zeitschrift für Hygiene und Infektionskrankheiten.*

- a. MÜLLER, R. W., 1949.—“Über Allergie und Immunität bei der Ascarisinfektion des Menschen.” 130 (1/2), 28–35.
- b. BECKERS, H., 1949.—“Diagnose und Therapie der Oxyuriasis bei geschlossenen Gruppen von Kindern.” 130 (4), 361–383.

(841a) Müller points out that the transitory eosinophil lung infiltration which often accompanies the passage of *Ascaris* larvae through the lungs varies considerably in severity and extent. Studies carried out in Germany during 1948 showed that the symptoms were more frequent and more severe among persons from a worm-free area who moved to a heavily infected one than among people brought up in an infected area. It is concluded that eosinophil infiltrations are not so much a sign of passage of larvae through the lungs as a specific defence mechanism of the body, with the help of an antigen-antibody reaction following on several previous infections.

A.E.F.

(841b) Beckers has examined three series of Bonn children for *Enterobius* infection by means of Schöffner's anal smear technique (from three to seven smears were taken from each child). The percentages found infected were: (i) 98.6% of 213 primary school-children; (ii) 80% of 25 children of pre-school age living in a home; (iii) 100% of 29 children of school age living in a home. Treatments with Cupronate and Lubisan were unsuccessful, but combined treatment with “Antiox” tablets (containing basic aluminium subacetate, aluminium sulphate and magnesium sulphate), an anal ointment, and enemas cured 10 out of 31 cases and is considered to be the most promising method.

A.E.F.

842—*Zeitschrift für Hygienische Zoologie und Schädlingsbekämpfung.*

- a. SCHLIEPER, C., 1949.—“Untersuchungen über die Rodenverseuchung in einem Gebiet grosser Spulwurmhäufigkeit.” 37 (10), 285–297.

(842a) Schlieper has examined soil samples at Griesheim (a country town of 8,000 inhabitants near Darmstadt, which is said to have an incidence of 85% to 90% human *Ascaris* infection) in order to determine the presence of *Ascaris* ova. Of ten samples taken at schools or kindergartens six were negative, two had one egg per gramme of soil and two had 2–4 e.p.g. Of 18 samples from courtyards seven were negative, five had one e.p.g., and six had 2–4 e.p.g. Of 18 samples from kitchen or market gardens four were negative, two showed one e.p.g., five showed 2–4 e.p.g., two showed 5–19 e.p.g. and five showed 20 e.p.g. or over. Samples (18) from sewage-irrigated fields gave the following results: seven negative, five with one e.p.g., four with 2–4 e.p.g., one with 5–19 e.p.g. and one with 20 e.p.g. or over. It was estimated that from 50% to 60% of all ova recovered were embryonated.

A.E.F.

843—*Zeitschrift für Laryngologie, Rhinologie, Otologie und ihre Grenzgebiete.*

- a. SCHUMACHER, H. W., 1949.—“Ueber eine Chenopodiumölvergiftung eines achtjährigen Mädchens.” 28 (7), 332–338.
- b. ERB, K., 1949.—“Über Cochlear- und Vestibularschädigungen nach Vergiftung mit Oleum Chenopodii.” 28 (9), 449–454.

844—Zeitschrift für Parasitenkunde.

- a. MATTES, O., 1949.—"Wirtsfindung, Invasionsvorgang und Wirtsspezifität beim *Fasciola Miracidium*." 14 (4), 320-363.
- b. DINNIK, J. & DINNIK, N., 1949.—"Struktur und Ursprung der Eischale bei Nematoden der Unterordnung Trichocephalata." 14 (4), 364-376.
- c. PIEKARSKI, G., 1949.—"Über den Befall mit Darmparasiten bei Schulkindern und ehemaligen Soldaten." 14 (4), 377-387.

(844a) Mattes describes in great detail the anatomy of the miracidium of *Fasciola hepatica* with special reference to the organs involved in the penetration of the intermediate host. This is followed by an account of the actual processes of penetration of *Limnaea truncatula*, based on actual observation and (for the later stages) on sections of snail tissue, and of migration within the snail to the site of sporocyst formation. Mattes has also exposed various species of land and water snails, turbellaria, annelids, Chironomidae larvae, hydrozoa and larvae of *Rana* and *Bufo* to *F. hepatica* miracidia in an attempt to determine how far the latter are selective in their choice of host. He found that miracidia attacked all species indiscriminately and made active attempts to penetrate even though they failed in all cases except certain species of water snails. Some species (e.g. turbellaria and hydrozoa) took active defence measures but it was shown that miracidia will continue to attack unsuitable hosts until they die or become incapable of further effort. A.E.F.

(844b) Dinnik & Dinnik describe the formation and structure of the egg shell in helminths of the suborder Trichocephalata. It consists of four membranes which form successively round the fertilized ovum and differ in structure and in chemical properties. The outer membrane is very thin and colourless and separates itself from the surface of the ovum immediately after the spermatozoon has penetrated. The two middle membranes are formed from a gelatinous layer between the outer membrane and the ovum and separate into two membranes and two polar prominences. The subsequent thickening of these middle membranes increases resistance to external influences. The polar prominences are not so thick as the membranes and through these the larvae eventually emerge. The inner membrane separates from the ovum after the fusion of the germ nuclei in the ovum: it is semipermeable and offers good protection against chemical influences. A.E.F.

(844c) Piekarski reports that 99% of 400 schoolchildren at Bonn were positive for *Enterobius vermicularis*. A single anal swab showed 75% infected, up to three anal swabs showed infection among 95%-98% and up to seven swabs (within a period of six weeks) showed 99% infected. Of 200 children, 25% harboured *Ascaris lumbricoides* (18% girls, 32% boys). There were three cases of whipworm infection among 200 children examined. A.E.F.

845—Zeitschrift für Sozialhygiene. Berlin.

- a. LENTZE, F., 1949.—"Askariidose und Oxyuriasis, ein aktuelles Gesundheitsproblem." 1 (1), 9-12.

(845a) Lentze comments on the high incidence of human ascariasis and enterobiasis in post-war Germany and emphasizes the hygienic aspects of both infections. He considers ascariasis to be largely due to the consumption of vegetables grown in kitchen gardens manured with human faeces. The incidence of enterobiasis could be reduced by greater attention to personal hygiene. A.E.F.

846—Zeitschrift für Tropenmedizin und Parasitologie.

- a. ENIGK, K., 1949.—"Zur Biologie und Bekämpfung von *Oxyuris equi*." 1 (2), 259-272.
- b. EHLERS, H. J. & KNÜTTGEN, H., 1949.—"Ein Fall von Distomatosis hepatica bei einem 8½ jährigen Mädchen." 1 (3), 364-378.
- c. VOGEL, H. & MINNING, W., 1949.—"Weitere Beobachtungen über die Cercarienhüllenreaktion, eine Seropräzipitation mit lebenden *Bilharzia*-Cercarien." 1 (3), 378-386.

- d. DINNIK, J. A., 1949.—"Eigentümlichkeiten und Entstehung der verschiedenen Entwicklungsweisen bei den Larven der Strongylata (Nematoda)." 1 (3), 386-416.
 e. MAIER, E. H., 1949.—"Über örtliche Eosinophilie im sogenannten 'dicken Tropfen' um Mikrofilarien von *Loa loa* und *Filaria perstans*." 1 (3), 416-420.

(846a) Enigk has worked out experimentally details in the life-history of *Oxyuris equi*. Ova do not embryonate until 24 hours after they are laid in the peri-anal region and are not infective until two ecdyses have taken place within the egg (i.e. five days after eggs are laid). The third-stage larvae inhabit the mucous membrane of the ventral colon and of the caecum. The third ecdysis takes place 3-11 days after ingestion and the fourth-stage larvae migrate to the caudal part of the dorsal colon. The final ecdysis takes place from 45-60 days after ingestion of infective material and the prepatent period varies between 139 and 156 days. Infection of the horse occurs by intake of infective ova with the straw. Both third and fourth-stage larvae have pathological effects. Fourth-stage larvae are eliminated by phenothiazine but not by Allegan, whilst fifth-stage larvae are destroyed by Allegan although phenothiazine has practically no effect on them. A.E.F.

(846b) A case of infection with *Fasciola hepatica* is reported in a girl eight years and six months old living near Hamburg. There was eosinophilia of 42% and eggs were present in the faeces. Four months after treatment with emetine hydrochloride there were no eggs in the faeces and the eosinophilia had fallen to 8%. R.T.L.

(846c) The close fitting transparent membrane which forms around schistosome cercariae in sera of infected persons or animals also developed after successful treatment of a case of schistosomiasis *mansoni* but was negative at 21 months. A similar reaction formed around cercariae of the ocellata group but not with cercariae of various other trematodes. Vogel & Minning are of the opinion that the reaction now reported differs from that observed by Papirmeister & Bang around *Schistosoma mansoni* cercariae when immersed in sera from infected monkeys [for abstract see Helm. Abs. 17, No. 63a]; this latter reaction resembles the loose voluminous precipitate which Vogel & Minning have observed with the sera of certain mammalian hosts, whether infected with trematodes or not. R.T.L.

(846d) Dinnik divides the Strongylata into four groups according to their larval development: (i) those with free-living rhabditiform larvae which feed, develop and moult twice before becoming infective, e.g. species of Strongylidae, Ancylostomidae, Stephanuridae, Trichostrongylidae (except *Nematodirus* spp.) and Heligmosomatidae; (ii) those with larvae which develop within the egg-shell until reaching the infective stage, e.g. species of Amidostomidae, Syngamidae, Cyathostomidae, Heligmosomatidae and *Nematodirus*; (iii) those with free-living larvae which are supplied with food reserves and do not feed before becoming infective, e.g. *Dictyocaulus* spp. and (iv) those with larvae which, after hatching, undergo further development in an intermediate host which is itself swallowed by the definitive host, principally Metastrongylidae (excluding *Dictyocaulus*). This last group is regarded as a transitional stage between a free-living and a parasitic existence. P.M.B.

(846e) In thick blood films from 86 patients with either *Loa loa* or *Acanthocheilonema perstans*, the eosinophil cells tended to segregate in the neighbourhood of the microfilariae. Maier believes that this is due to some excretion which attracts the surrounding eosinophils when the movements of the microfilariae become restrained as the film begins to coagulate. R.T.L.

847—Zeitschrift für Vergleichende Physiologie.

- a. WINTERSTEIN, H. & ÖZER, F., 1949.—"Osmotischer Druck und Ionengleichgewicht beim Blutegelmuskel." 31 (3), 308-321. [English summary p. 321.]

(847a) Winterstein & Özer have carried out experiments to determine the effect of the osmotic pressure and ion content of various solutions on the dorsal muscle of *Hirudo*

medicinalis. The solutions tested include pure sugar, pure sodium chloride, sodium free sugar, calcium and sodium chloride with potassium. It is concluded that tonic contractions are dependent on the osmotic pressure and ion content of the surrounding solution. Tonic contractions and stimulation contractions are entirely independent phenomena. A.E.F.

848—Zentralblatt für Bakteriologie. Abteilung 1. Originale.

- a. SCHÜFFNER, W., 1949.—“Retrograde Oxyuren-Infektion, ‘Retrofektion’. IV. Mitteilung.” 154 (3/5), 220–234. [English, French & Russian summaries p. 233.]
- b. SPREHN, C., 1949.—“Beispiele für zeitgemäße Therapie zooparasitärer Krankheiten.” 154 (3/5), 55*–62*.
- c. LENTZE, F. A., 1949.—“Entwicklung, Epidemiologie und Bekämpfung der in Deutschland vorkommenden menschlichen Helminthiasen.” 154 (3/5), 75*–97*. [Discussion pp. 141–147.]
- d. WIGAND, R., 1949.—“Chemotherapie der Helminthiasen.” 154 (3/5), 98*–110*. [Discussion pp. 141–147.]
- e. BURLINGAME, P. L., 1949.—“Askariasis im Kreis Darmstadt. (Vorläufiger Bericht.)” 154 (3/5), 111*–116*. [Discussion pp. 141–147.]
- f. BURLINGAME, P. L., 1949.—“Eine Methode zur Zählung von Askarideneiern.” 154 (3/5), 116*–118*. [Discussion pp. 141–147.]
- g. VOGEL, H., 1949.—“Immunologie der Helminthiasen.” 154 (3/5), 118*–126*. [Discussion pp. 141–147.]
- h. ENIGK, K., 1949.—“Tierische Helminthiasen.” 154 (3/5), 127*–138*. [Discussion pp. 141–147.]
- i. SCHÜFFNER, W. & SWELLENGREBEL, N. H., 1949.—“Der dritte Infektionsweg für Oxyuren, die ‘Retrofektion’. (Vorläufige Mitteilung.)” 154 (3/5), 138*–139*. [Discussion pp. 141–147.]
- j. SCHMIDT, H., 1949.—“Zur Immunologie der Ascariden.” 154 (3/5), 139*–140*. [Discussion pp. 141–147.]
- k. KIKUTH, W. & GÖNNERT, R., 1949.—“Miracil, ein neues therapeutisches Mittel gegen menschliche Bilharziose.” 154 (3/5), 148*–150*. [Discussion p. 150.]
- l. WAGNER, O., 1949.—“Trichinose bei Tier und Mensch.” 154 (3/5), 155*–160*. [Discussion p. 160.]

(848a) Schüffner has conclusively proved by experiments on adults (he himself being one of the volunteers) that “retroflection” (i.e. entry of larvae via the anus followed by migration to the caecum) constitutes an additional mode of human infection with *Enterobius vermicularis*. Retroflection is characterized by a primary infection, after a pre-patent period varying between 43 and 76 days, followed by a series of “recidives” [Schüffner prefers this term to “relapse” or “reinfection”], the first of which occurred 41–49 days after the primary attack. “Recidives” followed at very irregular intervals (between one and 52 days): theoretically the infection must be considered at an end when no “recidive” has occurred for 101 days (the most recent figure for the life-span of *Enterobius*). Schüffner points out that the primary infection cannot naturally be by retroflection: it must be *per os*. Retroflection has only been established for adults; its occurrence in children would be difficult to prove because of the possibility of other modes of infection. The discovery of retroflection explains many unsolved problems, particularly the failure of therapeutic and hygienic measures in adults, but it also raises new ones. It opens up new possibilities of control since the chain of “recidives” can be broken if eggs are removed from the anal region every six hours, i.e. before they have a chance to hatch. A.E.F.

(848b) Sprehn reviews our present knowledge of the treatment of the diseases of domestic animals (including poultry) caused by helminths, protozoa and arthropods. He points out that some of the drugs are not now readily available in Germany. A.E.F.

(848c) Lentze presents a review of the literature on the development, epidemiology and control of helminth parasites of man which occur in Germany. He concludes that the really dangerous parasites, hookworm, *Trichinella* and *Taenia*, have been defeated and no longer represent a problem: on the other hand, *Ascaris* and *Enterobius* infections have increased enormously under post-war conditions and are causing the public health authorities deep concern. A.E.F.

(848d) In an attempt to guide the practising physician through the welter of technical literature on anthelmintics, Wigand has constructed a series of tables which list the principal drugs, the parasites against which they have been used, the experimental animals used, results in man, possible dangers of administration, and side effects. A further table describes the way in which drugs affect the helminths. Wigand stresses that anthelmintic research is too often divorced from practical aims: work should be carried out by chemists, biologists, pharmacologists, veterinary surgeons and medical practitioners working in the closest co-operation.

A.E.F.

(848e) Burlingame presents a preliminary report on a survey of human ascariasis carried out in Darmstadt and district during February and March 1947. A total of 1,161 children and 247 adults were examined [for details of the technique used see following abstract]. The percentage infection in children varied between 99% (at Griesheim, a market-gardening district irrigated with Darmstadt sewage) and 62%, with an average of 84%; in adults it varied between 100% (Griesheim) and 50%, with an average of 70%. Of the children 39% were lightly infected, 28% moderately, 13% heavily and 4% very heavily.

A.E.F.

(848f) Burlingame describes the thick smear technique used in the *Ascaris* survey of the Darmstadt area [see preceding abstract]. Approximately 0.2 gm. faeces were spread evenly over two-thirds of a microscope slide, fixed for five minutes in 95% alcohol plus a few drops of eosin, dehydrated and cleared. Examined under a cover-glass, eggs appeared yellow to brown against a rose-coloured background. The number of eggs per microscope field multiplied by 2,900 (i.e. 5×580 , the latter number representing the number of microscope fields per smear) gave the egg count per gramme of faeces. Up to 2,900 eggs per gramme was classed as a light infection, 5,800–14,500 as moderate, 17,400–58,000 as heavy, and 60,900 and above as very heavy. [A graph comparing counts of 10, 25 and 100 fields and Stoll egg-counts of the same faecal specimen is mentioned in the text but is not reproduced.]

A.E.F.

(848g) Vogel reviews earlier work on helminth immunology under two heads: (i) immunobiological tests (e.g. serological and skin reactions), and (ii) experiments on animals designed to develop immunizing processes which would provide a defence against infection. Under the second head he is concerned only with immunity acquired either by an earlier infection or by active or passive immunization. Vogel also describes an uncompleted series of his own experiments [not yet published] with *Schistosoma* infections in dogs and rhesus monkeys.

A.E.F.

(848h) Enigk reviews the literature on strongyloid infections in domestic animals with special reference to the bionomics of the causal parasites. He also refers to treatment with phenothiazine against strongyles, with sodium fluoride against ascarids and with trichloracetamide against migrating larvae in the tissues.

A.E.F.

(848i) [This is a brief preliminary communication on the experiments described in detail in *Zbl. Bakt. Abt. I. Orig.*, 1949, 154 (3/5), 220–234. For abstract see above No. 848a.]

(848j) Schmidt describes his work on *Ascaris* antigens: he prefers to use protein, lipid, fat and polysaccharide extracts. His studies are still in progress and have so far been limited to *A. lumbricoides*, *A. suis* and *Parascaris equorum* antigens. Intradermal tests on children have led to the conclusion that *A. lumbricoides* and *A. suis* are not identical, but Schmidt does not think that skin tests alone can establish a diagnosis of ascarid species. Preliminary work with ascarid polysaccharides points to their possible use in eliminating iso-agglutinins from preserved human serum.

A.E.F.

(848k) Kikuth & Gönnert describe briefly the series of experiments started in 1932 with the object of discovering a suitable drug for the oral treatment of schistosomiasis, and which led in 1941 to the synthesis of miracil-D. Since the war the drug has been extensively tested against *Schistosoma mansoni* and *S. haematobium* and has been found to be well tolerated and to have an efficacy of about 66%. It has not yet been tried against *S. japonicum*.
A.E.F.

(848l) Wagner states that examination of cats in a given area should provide a guide to *Trichinella* incidence in man, since infection in these hosts runs roughly parallel. *Trichinella* infections in animals do not produce the clinical picture associated with the disease in man. Experimental infections in pigs give widely varying results: Wagner reports one pig as being completely resistant whilst another, although negative at official inspection, revealed large numbers of larvae when subjected to artificial digestion. Wagner describes his own method of preparing antigen and concludes that the most reliable method for diagnosing human infections is Gaase's complement-fixation technique plus intradermal tests.
A.E.F.

849—Zentralblatt für Chirurgie.

- a. KRUG, K. W., 1949.—“Vortäuschung einer tuberkulösen Bauchfellentzündung durch eine Askariasis.” 74 (5), 476–480. [English, French & Russian summaries p. 480.]

(849a) Krug describes a case of ascariasis in a 14-year-old girl which had at first been diagnosed as tubercular peritonitis.
A.E.F.

850—Ziraat Dergisi.

- *a. DIKER, T. & ARTAR, O., 1949.—[*Heterodera marioni* and the new soil fumigants.] 10e Année, No. 96, pp. 29–34. [In Turkish.]

851—Zoologica Poloniae.

- a. JANISZEWSKA, J., 1949.—“*Sphaerostomum maius* sp. nov. un nouveau vers parasite du *Squalus cephalus* (L.).” 5 (1), 1–5. [Polish summary p. 1.]
b. JANISZEWSKA, J., 1949.—“Some fish nematodes from the Adriatic Sea.” 5 (2), 7–30. [Polish summary p. 7.]
c. OGIELSKI, L., 1949.—“Reaction of vascular vessels against an invasion of the larvae of *Trichinella spiralis*.” 5 (4), 35–42. [Polish summary p. 35.]

(851a) *Sphaerostomum maius* n.sp. which inhabits *Squalus cephalus* is much larger than any of the three known species, *Sphaerostomum minor*, *S. globiporum* and *S. bramae*. It measures 4–6 mm. in length by 1.4 mm. in breadth, the uterine wall is stout and the eggs are 0.075 by 0.035 mm. These and other differences are tabulated. It is probable that Zschokke (1884) confused this new species with *S. globiporum* and *S. bramae*.
R.T.L.

(851b) Janiszewska has investigated the nematode parasites of 18 species of fish from the Adriatic Sea near Split, Yugoslavia. He describes and draws for the first time the male of *Cucullanus longicollis* from the intestine of *Mullus barbatus*. It is smaller than the female, the spicules are equal in length (0.77–1.02 mm.) and are provided with rim-like winglets; the gubernaculum is short and the distance between the sucker and the anus is from 0.4–0.43 mm. *Labrus merula* is recorded as a new host for *C. micropapillatus*. The female of *Philometra serranelli-cabrillae* n.sp. from the ovaries of *Serranellus cabrilla* is described and illustrated. Other nematodes mentioned are *Cucullanus* sp., *C. praecinctus*, *C. minutus*, *Philometra globiceps* and larvae of *Contracaecum fabri*, *C. aduncum*, *Rhapidascaris* sp., *Anisakis* sp. and *Spiruroideorum* sp. Janiszewska also discusses the systematic position of the *Cucullanidae*.
S.W.

(851c) The local reaction of the circulatory system to the encystment of trichinae was studied histologically in the transversely striated muscle of experimentally infected mice. No change was observed in the capillary system of the muscle until the 24th day, when coiled trichinae began to appear. In the diaphragm, these were located near the points where the precapillaries branch from the arterioles. The precapillaries gave rise to capillaries which after six days almost surrounded the coiled worms. As cysts formed, the transverse striping of the muscle began to disappear. After 46 days, fully developed cysts were completely surrounded by a network of 1st, 2nd and 3rd order capillaries which had developed from the precapillaries. In the thigh muscles, however, the cysts were directly enclosed by the larger arterioles about 50μ thick. Ogielski believes that the larvae settle in the diaphragm, larynx, oesophagus and intercostal muscles owing to the exceptional density of the capillary network, and so remain in the circulatory system until they reach the larger precapillaries. They then penetrate the muscle fibres, their excretions causing granular disintegration of the sarcoplasm giving rise to local inflammation. P.M.B.

852—Zoologicheski Zhurnal.

- a. KLESOV, M. D., 1949.—[Studies of the biology of the nematode *Thelazia rhodesii* Desm.] 28 (6), 515–522. [In Russian.]

(852a) [This paper is similar in substance to one published by the author in *Dokl. Akad. Nauk SSSR.*, 1949, 66 (2), 309–311. For abstract see *Helm. Abs.*, 18, No. 190g.]

853—Zoology Publications from Victoria University College, Wellington, New Zealand.

- a. RICHARDSON, L. R., 1949.—“Studies on New Zealand *Hirudinea*: Part II. *Branchellion parkeri*, a new ichthyobdellid leech.” No. 1, 11 pp.

(853a) Richardson describes as *Branchellion parkeri* n.sp. an ichthyobdellid leech which “lacks tubercles, has 31 pairs of fully developed gills (although a minute reduced lobe represents a gill on xiii a₂), and is unique in the possession of only 10 pairs of pulsatile vesicles. The genital pores are immediately adjacent on either side of the annulus xi/xiii. This leech is known on species of *Raia* and *Mustelus* in New Zealand waters”. At the Otago Institute in 1891, Parker exhibited specimens for which the name *B. rajae* was suggested in the event of their proving to be a new species, and Richardson is of the opinion that if these specimens are ever located, they will probably be found identical with *B. parkeri*. P.M.B.

854—Zootechnica e Veterinaria. Milan.

- a. FERRARA, B., 1949.—“Su di un caso di infestione oculare da thelazio in un bovino.” 4 (8/9), 619–626. [English & French summaries p. 625.]
b. BAGEDDA, G., 1949.—“Rachicentesi e la sindrome umorale cefalo-rachidiana nella cenurosi cerebrale degli ovini.” 4 (8/9), 630–635. [English & French summaries p. 635.]

(854a) Ferrara gives a detailed description, with measurements taken from eight females, of *Thelazia rhodesii* from the conjunctival sac of a 3-year-old cow at S. Barbara in the province of Salerno. R.T.L.

(854b) No specific changes were observed in the cerebrospinal fluid obtained by lumbar puncture in 46 sheep with cerebral and cerebellar coenurosis. R.T.L.

NON-PERIODICAL LITERATURE

- 855—BECK, E., 1949.—“Klinische und parasitologische Untersuchungen über die Verwendbarkeit von Mandaverm, Asta-Werke, Brackwede, als Spulwurmmittel beim Pferd.” Dissertation, Hanover, 31 pp.

Beck has carried out a series of tests to determine the efficacy of the isoamyl ester of mandelic acid (a fluid of the colour and consistency of cod liver oil sold under the trade name “Mandaverm”) against *Parascaris equorum* in horses. To determine tolerance, one series of horses was given doses varying between 3 c.c. and 40 c.c. per 50 kg. body-weight: doses above 15 c.c. caused only very transitory loss of appetite and looseness of stool. Further experiments showed the therapeutic dose to be 25 c.c. to 30 c.c. per 50 kg. body-weight, administered in one to one and a half litres of water by nasal sound. Of 11 horses treated in this way nine were cured (judged by faecal counts) and in the remaining two the egg count was reduced by 75%. The author concludes that “Mandaverm” is an efficient anthelmintic and is well tolerated by horses in the therapeutic dose.

A.E.F.

- 856—*BORCHERT, A., 1949.—“Strongyliden des Pferdes. Merkblätter über die hauptsächlichsten Parasiten und Parasitengruppen.” Leipzig: S. Hirzel Verlag, 18 pp.

- 857—BRUMPT, E., 1949.—“Précis de parasitologie.” Paris: Masson et Cie, 6th edit., Vol. I, pp. xii + 1-1042; Vol. II, pp. 1045-2138. Fr. 7,700.

- 858—CALDERÓN RODRÍGUEZ, J., 1949.—“Ensayo de los látex de *Pileus* y *Ficus* y sus enzimas proteolíticas como medicamentos antihelmínticos.” Thesis, Mexico, 66 pp.

Calderón Rodríguez examined the pharmacological and anthelmintic properties of (i) *Pileus mexicanus* latex, (ii) the vacuum-dried latex (crude “Mexicaina”), (iii) crystalline “Mexicaina”, (iv) *Ficus glabrata* latex (“Higueronia”), (v) the vacuum-dried latex (crude “Ficina”), and (vi) purified “Ficina” prepared from *Ficus* sp. The proteolytic action and the *in vitro* effect on helminths such as pig *Ascaris*, *Moniezia expansa*, *Thysanosoma actinoides* and *Dipylidium caninum* were both greater in *Pileus* than in *Ficus* extracts. Of the helminths tested, *Macracanthorhynchus hirudinaceus* was least affected. In trials in 104 dogs and 15 cats, *Pileus* latex appeared to be more efficient than *Ficus* latex, but crude “Ficina” was more efficient than crude “Mexicaina” in removing *Taenia*; purified “Ficina” was effective in dogs and cats. Dosage rates and percentage efficacies are given for each animal. Cats seemed less sensitive than dogs to the toxic effects of the drugs; purified “Ficina” was the most and “Higueronia” the least toxic. The thesis contains a great deal of useful information on the various species of *Ficus*, their geographical distribution, anthelmintic uses, and the popular and trade names by which their various extracts are known in Latin American countries.

E.M.S.

- 859—*CARR, H. P., 1949.—“Hookworm disease.” In: Tice’s Practice of Medicine, Vol. 5, pp. 79-106.

- 860—CONGRÈS INTERNATIONAL DE ZOOLOGIE (13th), Paris, July 21-27, 1948. Comptes Rendus.

- DOUGHERTY, E. C., 1949.—“Pure-culturing of a free-living rhabditid nematode.” pp. 447-448.
- ALVARADO, R., 1949.—“Sur la structure histologique de *Fasciola hepatica*.” pp. 450-451.
- GOODEY, T., 1949.—“Plant parasitic nematodes: a brief survey and some present day trends.” pp. 481-484. [Discussion pp. 484-485.]
- DESCHIENS, R., 1949.—“Les substances toxiques vermifuges, leur pouvoir pathogène, leur identification.” pp. 485-486. [Discussion p. 486.]
- PICK, F., 1949.—“Les lésions intestinales dans la distomatose à *Watsonius watsoni* chez le cynocéphale (*Papio sphinx*).” pp. 493-494.

- f. PICK, F., 1949.—"L'anatomie microscopique de *Watsonius watsoni* à partir de préparations in toto." pp. 494-495.
 g. DOLLFUS, R. P., 1949.—"Doit-on apocoper le radical des noms tirés des mots grecs, terminés en Α-ΑΤΟΣ." pp. 577-578.

(860a) After sterilization with streptomycin, *Rhabditis pellio* was grown in sterile pure culture for ten to twelve generations on slants of Difco nutrient agar. The addition of various vitamins did not materially affect the rate of growth. Maturation and reproduction occurred in liver extract heated to 55°C. for 30 minutes but not in any autoclaved medium.

R.T.L.

(860b) Using the silver impregnation techniques of Achúcarro and of Rio Horteiga, Alvarado has been able to confirm Ziegler's opinion that there is a true epithelium in *Fasciola hepatica* so transformed that no trace of nuclei remains. He names this layer "cuticular epithelium" reserving "cuticle" for the external membrane.

R.T.L.

(860c) In this address to the Applied Zoology Section of the 13th International Congress of Zoology Goodey gave a brief account of certain species of plant infesting eelworms, *Anguina tritici* and *A. agrostis*, which produce flower galls and emphasized the economic importance of the latter. He dealt with the stem eelworm, *Ditylenchus dipsaci*, paying attention to its mode of spread on seeds and to its weed hosts. Passing reference was made to the potato tuber eelworm, *D. destructor*, and consideration was then given to species of *Heterodera* with special attention to the formation of giant cells in tissues attacked by *H. marioni* and the manner in which the parasite feeds on these giant cells as determined by Linford. A short account was given of some plant infections due to certain species of *Aphelenchoides*.

T.G.

(860d) Deschiens distinguishes two types of pathogenic substances in helminths, according to their modes of action: (i) toxic substances especially polypeptides; (ii) allergic and anaphylactic substances, particularly proteins. The allergic substances are eosinophilogenic while the toxic substances are not, but they can produce experimentally acute or chronic intoxication similar to that in naturally acquired helminth disease. The biological reactions and symptomatology recall the acute or chronic effects of histamine. The gross lesions in chronic helminth intoxication consist of oedematous inflammatory infiltrations and necrotic manifestations, especially in the lung, kidney and liver. The allergic and anaphylactic substances are distinct from the toxic substances and seem to belong particularly to the true protein fractions. The recognition of these toxic substances will explain not only the pathogenesis of certain helminth diseases, but also open up possibilities of a new therapeutic approach.

R.T.L.

(860e) Pick briefly summarizes the various macroscopical and microscopical changes caused by the presence of *Watsonius watsoni* in the large intestine of baboons.

R.T.L.

(860f) After vital staining with the pigment of *Pyocyanea aeruginosa* and subsequent clearing in pure glycerine, Pick has observed in *Watsonius watsoni* (i) a bilaterally symmetrical system probably of nerve tissue; (ii) a bilaterally symmetrical superficial vascular system, probably belonging to the excretory system; (iii) a bilaterally symmetrical deep vascular system, communicating with the excretory system.

R.T.L.

(860g) Dollfus discusses the desirability or otherwise of the custom of reducing Greek roots by the omission of the last syllable and quotes various examples from Pearse's "Zoological Names". Some (e.g. Amphistomatina, Distomatina) are not reduced and others are (e.g. Gasterostomida, Cyclostomida etc.). Dollfus points out that if this procedure is accepted "nematodes" would be "nemodes" and "trematodes", "tremodes". Many write Ascaridae instead of Ascarididae, ignoring the fact that the Greek root is Ascarid. Pleurogenetinae so frequently used, should be Pleurogeninae.

R.T.L.

- 861—CONKLE, H. J., 1949.—“Potato rot nematode survey.” U.S. Department of Agriculture, Bureau of Entomology and Plant Quarantine, 17 pp.

Following a useful introduction on the occurrence of the potato rot nematode, *Ditylenchus destructor* Thorne, 1945 in Idaho, U.S.A. and Prince Edward Island, Canada, Conkle (who acted as supervising inspector) describes a survey carried out in 1948 in which an attempt was made to determine whether this eelworm occurred in potato tubers raised in the following states, viz., California, Colorado, Idaho, Montana, Nevada, Oregon, Texas, Utah and Washington. Trained inspectors were stationed at all places where commercial stocks of potatoes were being passed over grading machines from which any suspected tubers were removed for subsequent microscopic examination by experts. No potato rot nematodes were found in any of the tubers examined. Incidentally the survey afforded an opportunity for the collection of soil samples at grader locations and potato storage cellars. These were sent to the Hicksville Laboratory, Long Island, New York, where they were tested for the presence of the potato root eelworm, *Heterodera rostochiensis*, but no cysts of this parasite were found in the 378 samples obtained from 142 locations in 62 counties of the Western States.

T.G.

- 862—EGYPT, MINISTRY OF PUBLIC HEALTH, 1949.—“Joint OIHP/WHO Expert Study Group on African Schistosomiasis. Report of the Expert Group on its first session.” Cairo, 10 pp. + Annex 3 pp.

An expert study group on African schistosomiasis which met in Cairo in October 1949 recommended that surveys should be made of the incidence and intensity of *Schistosoma haematobium* and *S. mansoni* in the various countries affected and that standard uniform techniques should be used. Quantitative knowledge is desired on the relation between the incidence and intensity of infection and the loss of productive power of the infected individual and its economic consequences. The development of immunity should be further investigated. Prevention of water pollution requires a change in customs and habits as well as the provision of pure water and sanitary latrines. Bored hole latrines have had no evident effect on the incidence of schistosomiasis in Egypt. The molluscicidal effect of penta-bromophenol and penta-chlorophenol at 10 parts per million and of dynamite explosions should be confirmed. The attention of WHO is drawn to the need of trained personnel for survey and control work, and that of UNO and FAO and all countries contemplating extensive irrigation schemes, to their potential danger unless proper sanitary and snail controls are provided. The principles and techniques of a schistosome survey are detailed in an appendix.

R.T.L.

- 863—*EVANS, A. S., KUNTZ, R. E. & STIREWALT, M. A., 1949.—“The albino mouse as a laboratory definitive host for *Schistosoma mansoni*.” Report. Naval Medical Research Institute, Bethesda, Maryland. Project X-535, Report No. 23, 11 pp.

- 864—*FOSTER, A. O., 1949.—“Internal parasites of livestock.” Lake Success: United Nations, 11 pp.

- 865—*FOSTER, A. O. & ENZIE, F. D., 1949.—“Phenothiazine for the control of livestock parasites.” U.S. Bureau of Animal Industry, 9 pp.

- 866—*FREMONT, O., 1949.—“Traitement de la filariose humaine par un nouveau dérivé de la pipérazine, la 1-diéthyl-carbamyl-4-méthylpipérazine.” Thesis, Paris.

- 867—*MAPES, C. R., 1949.—“Notes on the biology of *Muellerius minutissimus* Megnin, 1878, and a report on therapy with 1-diethylcarbamyl-4-methylpiperazine hydrochloride, caricide, in sheep.” Thesis, Cornell, 100 pp.

“Caricide” given orally to sheep at the rate of 300 mg. per kg. body-weight per day has a marked lethal effect on *Strongyloides papillosus* and *Muellerius minutissimus*. In *Zonitoides arboreus* the larva of *M. minutissimus* reaches the infective stage in about 27 days.

R.T.L.

- 868—MARTINS, A. V., 1949.—“Diagnóstico de laboratório da esquistossomose mansoni.” Belo Horizonte : Imprensa Oficial, 265 pp.

With personal experience of 2,253 cases of *Schistosoma mansoni* infection Martins reviews and assesses the value of the various diagnostic methods hitherto used, dealing in successive chapters with (i) faecal examination, (ii) rectal biopsy, (iii) intradermal tests, (iv) complement fixation with various antigens, (v) other serological techniques, and (vi) “provoked eosinophilia”.

R.T.L.

- 869—*PFIZENMAIER, G., 1949.—“Die Lungenwurmseuche bei den württembergischen Wandschafherden mit Beiträgen zur biologischen und medikamentellen Bekämpfung.” Dissertation, Giessen.

- 870—SCHMID, F., 1949.—“Diagnose und Bekämpfung der parasitären Krankheiten unserer Haustiere.” Berlin : Richard Schoetz, 5th edit., viii + 264 pp.

- 871—*SCHÜTZ, F., 1949.—“Beiträge zur Kenntnis der anthelminthischen Wirkung von n-Butylchlorid und Diaminomethylakzidin (Wurmmittel ‘T Hoechst’).” Dissertation, Giessen.

- 872—STEYN, D. G., 1949.—“Vergiftiging van mens en dier met gifplante, voedsel en drinkwater.” Pretoria : J. L. van Schaik BPK., viii + 264 pp.

Steyn describes the symptoms and lesions observed in sheep poisoned by the ingestion of the plant *Hertia pallens* in parts of South Africa and records that complaints have been received that anthelmintics containing arsenic and copper or carbon tetrachloride had caused mortality when administered to sheep and goats in areas infested with *H. pallens*. He attributes the mortality to the treatment of animals whose livers had been damaged (fatty degeneration) by the toxic principle of this plant, and recommends that stock to be dosed with remedies which contain chemicals toxic to the liver should be removed from, and kept off pastures heavily infested with this poisonous plant, before and after treatment.

P.L.Ler.

- 873—*WAGNER-JAUREGG, T., 1949.—“Therapeutische Chemie. Arznei- und Desinfektionsmittel zur Bekämpfung von Infektionskrankheiten.” Bern : Hans Huber, 272 pp., Swiss fr. 37.50.

- 874—WHITTEN, L. K., 1949.—“Parasites of pigs in New Zealand.” Wellington: New Zealand Department of Agriculture, 5 pp.

Whitten lists the more important helminths of pigs in New Zealand with notes on their importance, mode of infection, pathogenic effects and the appropriate control measures. The species mentioned are *Ascaris lumbricoides* which in New Zealand is less frequent than is often thought; *Hyoststrongylus rubidus*; *Globocephalus urosulatus* which is not common; *Trichuris trichiura* of which heavy infestations have been observed; *Oesophagostomum dentatum* which seldom causes heavy infections; *Stephanurus dentatus*, which causes unthriftiness and renders portions of the carcass liable to condemnation, occurs in the Waikato and Auckland districts. *Metastrongylus apri* and *Choerostongylus pudendotectus* are common and are occasionally responsible for mortalities. *Cysticercus tenuicollis* is common and sometimes massive infections cause death from trauma of the liver. *Echinococcus granulosus* is often responsible for hydatid which tends to be of a generalized character. *Macracanthorhynchus hirudinaceus* occurs but is not very common.

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NOTE

In all indexes the reference is to the serial numbers and not to the pages. Numbers in **bold type** indicate abstracts, and numbers in Roman type refer to title-only entries.

In the Author Index there are no cross-references to show joint-authorship, but authors of joint papers are listed individually. Thus, a paper by "Brown, B., Jones, A. & Smith, J." would have three separate entries, "Brown, B.", "Jones, A.", and "Smith, J."

In the Index of Subjects, alphabetization is under the first word (e.g. "*Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed : papers on the genus as such ; papers on undefined species ; papers on new and defined species, e.g.

Capillaria
 —spp.
 —*aerophila*
 —*amarali* n.sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word, under the name of the parasite or disease, and under the name of the host. *Nematicides* for plant eelworms are listed separately under that word and under the name of the parasite.

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